The Builder.

Vol. XVI.—No. 794.

The New Theatre: Covent-garden.

MAY is to see the opening of the new theatre in Covent-garden. Great progress has been made in the works since the date of our last notice, though but a few days, so to speak, from that time have elapsed. Only after well-matured arrangements in all matters belonging to designs and drawings, and with perfect organization of the executory department, could so much have been accomplished as we are now able to discover in the interior of the building. Already, we can form an approximate idea of the appearance of the house when completed. But, two or three weeks of the labour of upwards of 900 men (for such actually is the number at present engaged in the building at Covent-garden), striving from early morn to late at night, well directed, must produce an effect on the largest or most elaborate piece of work,—the habitual rapidity of theatre-building even not being left out of the question. The peculiarity of the present case, however, lies in the novelty of the objects prescribed, and of the means adopted, not merely for obviating to some extent danger from fire, but in regard to the comfortable accommodation of the audience in every part of the house,—as to which point, the new Opera-house makes a step in advance such as no London theatrical manager, or proprietary, had before been enlightened or enterprising enough to hazard the experiment of.

Freedom from anxiety on the score of danger from fire, or crowding; comfortable seats; innoxious atmosphere (such as peculiarly, indeed, the late theatre, as remodelled, had the advantage of, by the attention to ventilation to gas-lights);—these can hardly be said to be procurable in any of the existing theatres, or to have been duly regarded at the only time at which they could be provided for, namely, at the original designing of those buildings. Such objects, to those not under the hallucination engendered by the atmosphere of the green-room and the habit of "motley," would obviously seem just as deserving of attention, as the engagement of highly-salaried actors, and the elaboration of costly "properties" and scenery. The theatrical-proprietary, like the hotel-keeping "interest," appear to ground every calculation of theirs upon the same idea,—to wit, that the visitor will come to the entertainment offered, as seldom as possible. But, we think it would be easy to show that, without the smallest diminution in the quality, or even splendour, of the drama or *spectacle*, it would be possible to conduct theatrical affairs at no greater cost, giving to matters before the curtain that attention which has been often asked for, but as yet has never been paid, unless we are to now record what Mr. Gye, with the aid of Mr. E. M. Barry, is doing, as a first example. Judging from the lengthened periods that many of the theatres remain unlet, or unremunerative to their managers, and from the variable numbers of audiences, it would almost seem not to have occurred to the mind of those most concerned, whether better, or at least less precarious, returns might not be realized by appealing to the tastes of the public, in a manner more consistent with the circumstances of the present state of society and the legitimate demands. To the managers we would, in short, say,—fail to improve your arrangements for the auditory; and the middle classes will continue coming to your houses once in a season, or less frequently; and at other times, will take the new facilities which there are for the pleasures of reading, or prefer home-occupation; and the drama will not maintain that position to which, as an art, it is, when properly administered, duly entitled.

To say what changes would be required in theatres,—that is, in whatsoever modern arrangement of plan,—to allow each person in the house to see, as well as hear, completely,—would be beyond our present ability,—particularly in the limits of this notice. We can, however, point to the facts, obvious enough, namely, that without any change made in the arrangement of theatres, "spectacle," as a branch of dramatic art,—and such *spectacle* as is designed on the supposition that each person in the house has an equally good view,—impracticable as that supposition actually is,—is becoming more and more predominant; that even out of the field of pantomimes and extravaganzas, the same requirement of a view of the business of the scene, should be better recognised than it is; yet, that the ancient theatre has afforded the only form of plan adapted to the particular dramatic object. The application of that plan to the modern theatre, without the alternatives of a contraction, as compared with what is now desired, in the area of the pit, or of giving so great width to the proscenium opening as might lessen the illusory effect of depth in the stage, does not seem to have been satisfactorily pointed out.

We refer to these things in order that it may be better understood what are really the improvements effected in the case of the new Opera-house, and what are those which, however desirable theoretically, it prefers no claim to have made, and which, after all, may be impossible without change in the stage and the spectacle itself, such as no architect would yet be allowed to venture on. Besides, it may be said, in an opera-house, hearing has greater importance over seeing, relatively, than in the ordinary theatre, and will afford sufficient enjoyment of itself.

The plan in the new building, as defined by the fronts of the boxes, does not exactly take the elongated horse-shoe form of the principal modern examples, yet cannot properly be said to approach the form of the Greek theatre, as might be supposed from a cursory reading of a recently published statement. This fact will be understood from a description, with the dimensions, of the part of the actual plan referred to. The greatest width, or measuring from the box-fronts on one side, across the house, to the fronts on the other, at the building in Bow-street, is 62 feet. If the reader will draw a line of that length, as diameter; take the half, or radius, and describe a semicircle; prolong the curvature at each end, or side, some 3 feet; and then join the curve, by straight lines, to the proscenium opening of 50 feet, at a distance of 44 feet 6 inches from the first-named diameter, he will have defined the plan. The distance of the proscenium from the front of the centre box is 75 feet 6 inches. The circle at the springing of the domical ceiling, omitting the cornice mouldings, will have a diameter of 65 feet.

The real modifications of the arrangement as usual in theatres, beyond those of the structural sort for security from fire, which we shall again speak of, have for their main object, greatly increased space to each sitting in the stalls both of pit and gallery, with ample width between the rows of seats. But, also, the divisions of the boxes are so designed and fixed as to be removeable in a few hours; so that the whole of what will be usually private boxes can be thrown together, should the theatre be devoted to ordinary dramatic entertainments, at certain seasons, according to an arrangement which has entered into Mr. Gye's calculation, and has in several respects modified structural features or dimensions. There are but three tiers of boxes, exclusive of those on the level of the lower gallery or "amphitheatre." They will be called "pit tier," "grand tier," and "first," or "upper box tier." The floor of the boxes of the pit tier is 8 feet 6 inches above the level of the entrance-hall, and on the same level as the front of the stage. The height of these boxes in the clear may be about 8 feet 6 inches. The floor of the boxes of the grand tier is 9 feet 6 inches higher, and the height of these boxes in the clear is about 10 feet. The height of the upper boxes in the clear is about 9 feet. The domical ceiling is borne by four elliptical arches, and pendentives. To the crown of these arches, from the floor of the lowest of the lower gallery, or "amphitheatre" stalls, there is a height of 22 feet 9 inches; above which, the rise of the ceiling to its crown at the circular ventilator (12 feet in diameter) is 8 feet.

The whole height to the crown of the ceiling from the floor of the boxes of the pit-tier, and the corresponding level at the front of the stage, will be 61 feet. Below this level, the lower basement-floor, under the stage and pit, descends to 23 feet. The whole height from the bottom of the footings to the lower flange of the roof-girders (themselves 9 feet additional), is about 85 feet. The highest portion of the walls, at the west end, reaches to about 93 feet from the street, and 109 feet from the basement-floor level.

The depth of the boxes, added to the width of the corridors, makes up a dimension of 13 feet 6 inches, and the tiers of iron columns are placed at a distance of 6 feet 6 inches from the box fronts. The columns connect with one another, tier and tier, being specially provided with flanged heads and base plates, and tenon-ends to fit into a bored portion of the hollow of the column above. They are also cast with boxed heads, allowing the iron cantilever girders to pass through, and the principal cross girders, or binders, to tail in. There is another binder, or joist, parallel with the last-named binders, at the fronts of the boxes, and a third for the support of the 3-inch rubbed York paving of the corridors. The boxes themselves are to have boarded floors, for which wooden joists are fixed between the cantilever girders, or parallel with the iron binders or joists. The cantilever girders are of wrought and riveted iron, and the binders of rolled iron.

There are four tiers of columns, namely, those of the three tiers of boxes and those of the pit corridor. They are respectively 9, 8, 7, and 6 inches in diameter, and of 1½-inch, 1¼-inch, 1⅛-inch, and ⅞-inch metal; and at the junctions of the tiers, besides the tenoning, the top and bottom plates are attached by four ⅞-inch bolts.

The back of the boxes was originally intended to be on the line of the columns; but about a foot of extra depth has since been given to the boxes, and taken off the passage. Each bay, or intercolumn, will be divided into two boxes of the ordinary size; but the whole of the partitions are so arranged as to be removable, as before alluded to. But, in addition to the provision for removal of the partitions, the box-fronts of the pit-tier will be removable, in order that the whole space under the grand-tier may be thrown into the pit-

The partitions will be canvassed and papered; and the ceilings, as generally throughout the house, the domical ceiling inclusive, will be covered with Bielefeld's "fibrous slab" material,—to the good properties of which we first drew attention. As part of the means of ventilation, the fanlights of the doors of the boxes are made to open. The warming of the house will be by hot-water pipes, carried round the house below the level of the pit floor, the air being admitted by apertures below the fronts of the boxes of the pit tier.

The boxes in the pit tier, and first or upper tier, of the regular dimensions, will be respectively thirty-six in number, two in each bay, but capable of any other arrangement. On the grand tier there are thirty-one boxes, the difference being made up by the boxes for the Queen and the suite, reached by a separate staircase and entrance from Hart-street, and by the box of the Duke of Bedford (the last on that side of the house), to which there is also a distinct staircase and entrance. The seats in the pit will be divided into two distinct classes. Of these, the seats of the best class occupy by far the largest space. As the advertisement says, "Each person will have a separate arm-chair, occupying a space of 2 feet," and a distance of 1 foot 8 inches, or more, appears to be provided for between the rows. There will be 316 of these stalls. The other pit seats will also be very superior to ordinary sittings, differing only from the others in allowing about 1 foot 8 inches to each seat, and about 1 foot 2 inches to the spaces apart. Thus 191 of these latter stalls are provided in a comparatively small space; but even there, with more than usual advantages. The lower gallery, or "amphitheatre," has 356 stalls, each 1 foot 8 inches. The framework of the seats is of iron, and the arms and back and seat will be well cushioned. There will be sixteen private boxes at this level. The principal upper gallery provides 380 sittings, from which there will be an excellent view; and side galleries also are being constructed.

Having thus shown what are the more important features of the new Opera-house, so far as the accommodation for the auditory is concerned, the description of the general plan and structural character may be completed. The building occupies a space of ground measuring 210 feet on the Hart-street side, and 219 feet on the south side, next the intended flower-garden, and about 123 feet 6 inches along the Bow-street end, and about the same at the other. But at the Bow-street end there is the enclosed carriage-porch and portico, projecting about 17 feet in addition, whilst the western end wall is strengthened externally by buttresses, projecting about 3 feet 6 inches. The area of the plan comprising the stage and auditory, is bounded north and south by longitudinal and cross walls of great strength, for the support of the massive trellis girders, which carry not only the iron cross girders or binders for the wooden floor of the carpenter's shop, but also the "flies;" and the whole system of framed curbs, ceiling joists, "fibrous slab," and decorative mouldings of the domed ceiling, with the cradling of the elliptical arches and pendentives, and much other work. This system of construction,—that is to say, the arrangement of suspending weight from the top of lofty walls,—necessarily calls for extraordinary strength, as where superadded to the weight of each girder itself, said to be nearly eighteen tons. Of the longitudinal walls, the external ones are 2 feet 4 inches in thickness, all the way up. The girders are, however, borne directly by the *inner* longitudinal walls, parallel with the others; and these walls are, in the basement, 3 feet 4 inches in thickness; to the first box tier, 3 feet; and for the remainder of the height, 2 feet 8 inches. In them occur great openings to the docks for the scenes; but the inner wall is tied to the external wall by cross walls of 2 feet thickness all the way up (generally about 20 feet apart), and by four tiers, each of two 1-inch iron bolts with plates, nuts, and screws. These cross-walls of course act as counterforts, though they are not in all cases opposite the ends of the girders. The girders themselves are carried on stone templates, 12 inches thick, below which twelve courses of brickwork in cement, with hoop-iron, are laid all round the building. The spaces of the plan formed by the parallel longitudinal and the cross-walls, are appropriated to staircases, dressing-rooms, the docks for scenery, and other uses.

The area of the stage (exclusive of the bow-front in advance of the proscenium) measures 90 feet by 88 feet 6 inches, the former dimension being the bearing of the roof girders. The whole length of roofing, inclusive of the roofs to the painting-room and the "amphitheatre" and gallery, is divided into nine bays, the distances of the eight girders, from centre to centre, varying from 19 feet 3½ inches to 21 feet. The girder above the proscenium is placed at a lower level, the valley gutter of the roof being supported from it by iron stancheons. A girder of the same kind as the others is placed for the support, on one side, of the floor of the painting-room; whilst at the other side, or next the rear wall of the building, where, as usual, space is left for the scene to be dropped down whilst work is in progress, the floor is carried by massive iron stancheons, bellied in the middle (as to their appearance in elevation), which are built up in great piers of brickwork. The girders (of 90 feet bearing and 9 feet in height), are formed of wrought and riveted iron, with top and bottom flanges, each of 18 inches in breadth, and double cross-bracing and uprights. They were proved to 150 tons. They were taken up in three pieces, with the aid of a strong staging erected in the middle of the building, and were then finally completed. The floor of the carpenters' shop seems intended to be formed only of wooden joists, laid on the iron binders, at distances of 2 or 3 feet apart, the floor-boards being little more than the ordinary thickness. Each bay is covered by a light iron roof, with slate slabs laid on iron purlins, and skylights. The painting-room has a "lean-to" spanning 30 feet 10 inches, with trussed rafters. The roofs of the ordinary bays are of simple construction. The iron gutters of the building vary from 16 inches in width to 2 feet, which last is the dimension of those next the external walls.

A few particulars may be added to complete the present notice. The timbers of the stage are now being framed together, with the co-operation of Mr. Sloman, in aid of the architect and contractors. The iron stancheons and diagonal bracing of timber forming the supports to the floor of the pit, are fixed. The "fibrous slab" for the ceilings, is being attached to the joists; and at the front of one of the boxes of the grand tier, there was lately "offered up" a specimen of the bow-fronted finishing, enriched with decoration in gold on a white ground. These fronts are to be executed in the newly-invented moulded canvas material, by Monti. The ceiling will be by Jackson and Son. The proscenium will measure 50 feet in the opening, and will be 42 feet 4 inches in height to the crown of the arch.

There are eight main staircases in the building, besides six of less importance. The whole of these are fire-proof, and carefully planned to avoid risk of accident. Besides the principal box-entrance, there appear to be five entrances for the pit also available for the boxes; but the precise application of these and the staircases to the upper parts of the house, is perhaps not settled. The entrance-hall, from which the principal staircase ascends, measures 60 feet by 25 feet, besides a recess, and is 26 feet 9 inches in height. There are twelve or more principal dressing-rooms, and long ranges of rooms, or galleries, in the upper part of the building, for the chorus and ballet.

The portico, it seems, is to be completed in time for the opening, and the columns are now fixed. The external dimensions of the portico are 80 feet by 16 feet: the columns are 36 feet 6 inches in height; and the height from the street level—or inclusive of the basement or carriage-porch—to the apex of the pediment, will be about 82 feet. The figures and *relievi* by Flaxman, from the old building, are in their places; the latter works having now backgrounds of dark blue colour. The casement doors of the crush-room, which is 81 feet 6 inches by 25 feet, and 26 feet 6 inches in height, will open into the portico. Some alteration seems to have been made in the piers and openings of the carriage porch since our view of last year appeared,* by which there will be square windows, glazed, rather than what was shown. The plastering, about which obviously great difficulty lies in works of this character, is chiefly confined to the box corridors, entrance-hall, staircases, and the crush-room of the present building; but includes a great amount of work. It has been executed with a first coat of Portland cement, and a floating and a setting coat of Parian cement.

We must take opportunities of referring to other points in the plan and construction of the building,—in which there is much that is suggestive,—and to the decorative finishing, which will be chiefly in white and gold, with rose-coloured hangings to the boxes. Mr. H. Miller is the clerk of the works, under Mr. Edward M. Barry.

REMNANTS OF THE PAST IN NEWCASTLE-ON-TYNE.

THE old castle stands on a platform which descends almost precipitously towards the river and the street called the Side. Various flights of steps lead to the Castle Garth. From the Side there are the "Dog-loup stairs." All appearance of antiquity has vanished from this part. The Castle Garth stairs, which rise from the close, are very picturesque. Near the top is a postern of great strength. Many of the shops here, and also near the Black Gate, are occupied by dealers in old clothes; and the gay colours, with the sombre tints of the building, aid in pleasing an artistic eye. Reaching the top of these stairs, and standing against the railings of the county court, a building of Grecian design, the view of the old castle is very fine. The battlements which were erected on the top some years ago are not in keeping. The walk from the castle to the Black Gate is particularly interesting. The shops with pent covering and mostly unglazed; the houses projecting story over story; and other evidences of unchanged antiquity, give us an idea of what many of the London streets were like in former days.

The superstructure of the Black Gate is of massive masonry; and visitors here would do well to examine the traces of Early English work which are to be found, and, if possible, make an exploration of the interior. It will be seen from our engraving that a building erected at different periods has been raised to a considerable height above the gate. Great alterations have been made in this neighbourhood by the erection of the Central Railway station, and it is proposed to make a street which shall come in line with the west sides of the new corn exchange and St. Nicholas's church. To the front of the Central station this will make a fine approach, but it will remove some curious groups of houses. The Black Gate, however, stands back, and we hope that it will not be necessary to take down this characteristic and striking example of ancient workmanship. From the strength and solidity of the masonry it would be no easy matter to remove it.

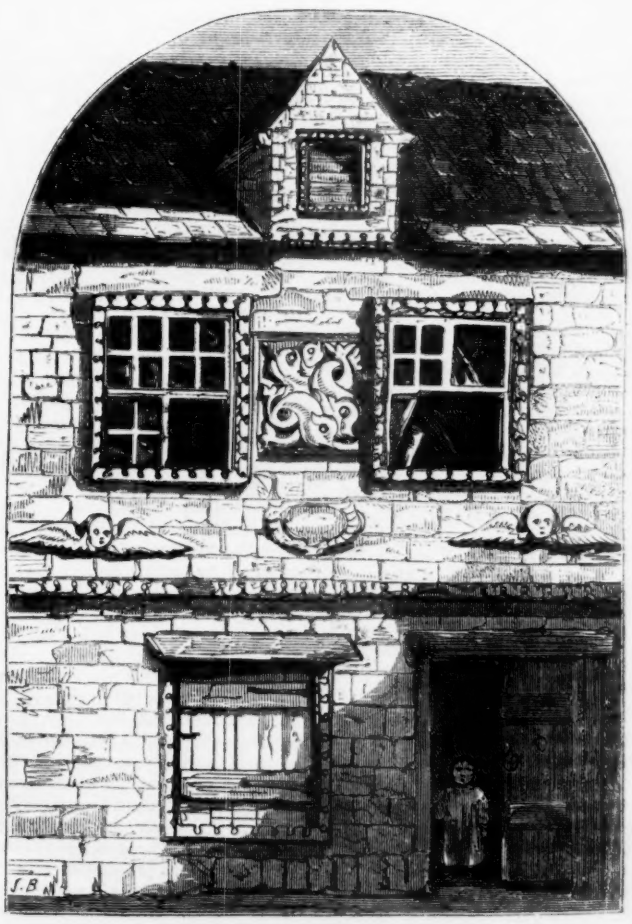
The picturesque and remarkable house shown in the engraving is situated in High Friar-street. It is substantially built with the stone of the neighbourhood. The cherubs, group of dolphins, and mouldings, are all of stone. The interior of the house seems to have become dilapidated, and at the time of a recent visit the place was unoccupied, and it was said that it might be shortly removed. It affords an example of peculiar domestic architecture of probably the seventeenth century. Perhaps some of our antiquarian readers at Newcastle may be able to give some account of it.

THE ARCHITECTURAL ASSOCIATION.—At a meeting of the members on Friday, April 16, a further contribution was made by Mr. S. E. Rosser, on the construction of chimneys. Messrs. Bunker and Herring, the hon. secretaries, announced that the next *conversazione* of the Association would be held on the 30th April, at Lyon's Inn Hall, and that the members generally would dine together on May 4. At the *conversazione* Mr. Robert Kerr will read a reproduction of his "Discourse on the Beautiful and the Fine-Arts," prepared for the Architectural Exhibition; and will, we hope, have a good audience. The meeting is open, we believe, to all members of the profession.

* Vol. xv. p. 611.

REMNANTS OF PAST TIME, NEWCASTLE-ON-TYNE.

The Black Gate.



Old House in High Friar-street.

BACKWARD SANITARY LEGISLATION.

A PRIVATE Bill is now before Parliament, drawn up, brought forward, and promoted by the corporation of Manchester, in which Bill there are clauses proposing to especially tax existing water-closets, and, inferentially, to prevent the erection of new ones. Such clauses, if passed, must, of course, compel the retention of existing cesspools, and provide for the formation of additional ones. The Sanitary Association of Salford has petitioned the General Board of Health, soliciting aid in opposition to the enactment of such clauses. The General Board, however, decline to interfere; and, as the Bill is otherwise unopposed, we may see the revival of cesspools, or their continuance, in Manchester and in other places, in spite of heavy annual mortalities. The annual average mortality of the places named below will show the relative sanitary condition of Manchester; and if cesspools are not only to be retained, but to be added to, we may infer the results. Average annual mortality for the seven years, 1850 to 1856, both inclusive, per 1,000:—London, 24·07; Birmingham, 26·79; Manchester, 31·48; Liverpool, 32·73. London, it will be seen, is very much healthier than the three towns named. Liverpool is the most unhealthy town in England, and Manchester the next. Surely there is reason why sanitary legislation should advance, and not retrograde. If we take the population of Manchester at 300,000, and could reduce the annual mortality to the standard of London, some 2,223 lives would annually be saved.

If the General Board of Health and Parliament learned that in Manchester there took place annually upwards of 2000 deaths by poison, imperial interference might be considered proper. Cesspools poison in the most subtle, deadly, and certain manner. Ask the surgeons of Manchester "where the typhus cases occur," and they will answer, "in close proximity to cottage cesspools." "Where cholera,"—the same answer. Surely there must be some fatally mistaken influences at work in the town-council of Manchester, or retrograde clauses of the kind named could neither have birth nor obtain support. It is bad enough to stand still, but it is worse to go back. Sanitary legislation may have had indiscreet friends; but most assuredly there are influential and powerful enemies, vested interests, and rude, healthy, robust, "look-at-me" opponents. This Manchester Bill should not be allowed to pass unchallenged. We have done our duty in drawing attention to it.

THE NEW SOCIETY OF PAINTERS IN WATER COLOURS.

THERE is always something to interest and delight in the exhibition of this Society; and the collection which is now open to the public, although scarcely equal to some that have preceded it, will not be found to afford an exception. There are 333 pictures contributed by fifty-three artists. Mr. Louis Haghe has five pictures; and, although no one of them is equal in importance to some of the works he has before exhibited, they are drawings of the highest merit. The most elaborate, "The Transept of the Church of St. Mark, Venice" (195), seen when Carmaniole repaired to St. Mark's, in 1428, has less human interest, the figures being but small, than (172) "The Drill," or (85) "The Spy," which includes an admirably painted view of a room in the Castle of Saltzburg. Mr. Henry Warren, besides some smaller but not less interesting works, gives the result of many laborious days, in a large picture inspired by Moore's "Light of the Harem," entitled "Song of the Georgian Maiden" (182). The strained position of the singer, though founded on truth, is painful; and the hand of Nourmahal, who is veiled with—

> "A mask that leaves but one eye free,
> To do its best in witchery,"

is over masculine; but the foreground group, as a piece of elaborate manipulation and gorgeous colouring, is entitled to high praise. Near it is an admirable picture by his son, Mr. Edmund Warren, "In the Forest of Dean," 207,—to our mind the most perfect work in the gallery. Mr. Warren has planted his tent "under the wide-spreading beech-tree," and has patiently and skilfully set forth the impression nature conveyed to him, with a result which will be a delight for many years to come. Mr. Bennett's landscapes want atmosphere even more strikingly than on former occasions, but still have merits of their own. Mr. Whymper has improved. His No. 11, "The Home of the Sea Fowl," should have had a better place: it has more of the poetical sentiment than any picture in the gallery. Of Mr. Vacher's contributions, we may especially name for praise,

(117) "View from the Punta di Tragara, Capri," showing Monte Salaro and the town. Mr. Chase has some good architectural drawings, including (115) "Roslyn Chapel," and (162) "Hurstmonceux Castle." Mr. Edward Corbould gives an elaborate piece of antiquarianism, called "Noah, a Miracle Play performed in the Streets of Hull in the fourteenth and fifteenth Centuries." Mr. Tidey supplies Mr. Absolon's place with a large conversation picture, called "A Field-day in the Last Century." Mr. Wehnert, who is abroad, sends four small drawings of buildings in Florence, of great excellence,—Nos. 299, 305, 313, and 316. No. 6, "The Poissons Rouges," by E. Morin; (11) "The Stye Head Pass, Wastdale, Cumberland," by Jas. Fahey; (36) "Port of Carnarvon," by T. S. Robins; (69) "The Last Leap of the Lledr," by D. H. McKewan; (165) "Safe off the Rocks," by J. H. Mole, are good specimens of the several artists' work. Nearly fifty pictures were sold on the private-view day.

CONGRESS OF DELEGATES OF LEARNED SOCIETIES, UNDER THE DIRECTION OF THE INSTITUTE OF THE PROVINCES OF FRANCE.

PRESERVATION OF MONUMENTS.

WE gave some account in our last number, of the opening of this congress.

The three first questions coming under the head of archæology and the fine arts were,—

1. In what state are the epigraphic collections existing in different towns of France?

2. Is it not desirable to direct the attention of the Government to the little interest taken in many places in these precious historical monuments?

3. Is it not desirable that towns possessing inscriptions and ancient sculptures, but having no fitting locality in which to preserve them, should be obliged to construct cheap sheds (*hangars*), to preserve them from the effects of the rain and the frost?

M. de Caumont suggested that these three questions should be discussed together, so as to embrace the whole subject of the preservation of architectural and archæological remains in provincial towns. He observed that, although during the last twenty years artistic taste had greatly increased in the provinces, many fine remains had been destroyed, and become lost to the country, for want of a little ordinary care. He quoted a remarkable instance, which had recently occurred at Grenoble, a town by no means wanting in inhabitants of taste and learning. One of the professors of the college, passing along a street in which the foot pavement was under repair saw, among the large stones being thrown out of a cart, one on which was a Roman inscription. Having searched further, and found many others, he applied to the proper authorities, and was so fortunate as to save these appliances to art from the utilitarian purpose designed for them. Instead, however, of being carried to a fitting place, they were put away in the cemetery of St. Laurent, where the inscriptions could not but suffer from the damp. But in addition to the damp, another and a more terrible enemy met them. Monsieur le Curé declared that they took up so much space as to interfere with the ceremonies of public worship, and must be removed. What might have been their fate it is impossible to say, had not relief appeared in the shape of the Scientific Congress, which chanced to meet that year at Grenoble. The consequence was, a vote of 300 francs as the nucleus of a subscription for their preservation. Even at Bordeaux (where a sum of 200,000 francs has just been voted for a botanical garden) the Epigraphic collection—one of the richest in France—is greatly neglected, the inscriptions being placed in a room entirely deficient in accommodation for study. Epigraphic collections placed in open courts are liable to be broken, and injured by the weather. Admitting that it behoves the country at large to preserve these valuable monuments of history and art, how is that end to be attained? Who is to do it? Too much should not be asked, or nothing may be obtained. The evil is growing. The most obvious remedy appears to be temporary accommodation, which must not only be rapidly executed, but economical; and it was to this end that M. de Caumont suggested sheds. The expense can hardly be urged as an objection, since in few cases could it exceed 5,000 or 6,000 francs (200*l.* to 240*l.* sterling).

M. Bardy objected to sheds, upon the general principle that all such provisional measures tended to prevent effectual remedies. He thought the great hope was in the action of the parent society upon the numerous provincial societies, and through the latter upon the local authorities. It was necessary to encourage the search for the valuable architectural and archæological remains believed to be scattered over France.

M. Driolle thought the idea of *hangars* unworthy of art. He urged the adoption throughout the provinces of the system pursued in Paris, where inscriptions are encrusted in the walls.

M. Garinet was convinced of the great improvement in the public taste for antiquarian remains. Formerly, if a peasant found a bronze statuette or a number of coins, they would be sold to the melter. Now, such objects would surely find their way to collections of provincial amateurs. The clergy are more or less men of intelligence and taste; and they might be urged to keep all discoveries of ancient remains in view. He was opposed to the centralization of works of art. They could, in most cases, be beneficially allowed to remain as historical evidences and illustrations, near the spot on which they were found. Architectural monuments, fortunately, could seldom be removed.

M. Boulatignier thought four elements should combine for the preservation of architectural and archæological monuments,—Learned Societies, Municipal Administrations, Conseils Généraux, and the Government. From the first, however, the chief aid must come. As they are not rich, they must substitute energy and activity for wealth. The funds at the disposal of the Municipal Administrations are required for many purely material but most necessary objects; and they can hardly be expected to create local taxes for intellectual purposes. The communes are in general poor, and it is not likely that Government will seek to promote epigraphic taste by prefétorial edicts. Still he thought that municipal and communal ambition might be roused by public appeals, and thus museums be founded to which private individuals would contribute money or objects of art. Though the title of *Hangars* seemed unfortunate, he liked the principle of light constructions, and pointed to practical England as an example. The construction of such light and cheap buildings he thought the utmost extent to which any public bodies are likely to go. But let such bodies, or the Government, give what money they may, the foundation and organization of public museums must be the work of scientific associations alone. He illustrated the inability of the Government to deal with such matters, by stating that some registers of the "*Arrêts du Parlement*," having been stolen from among the public archives, application was made to the Imperial library for the copies of the same deposited there, and which, to the library, were of comparatively little value. The Government, he assured the meeting, had been endeavouring *for the last twenty years* to obtain these copies, but hitherto without success. He arrived at the conclusion that, for the conservation of works of art out of the capital, the initiative must be taken by learned societies.

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Ultimately the motion resolved upon was, "That in order to ensure the preservation of architectural and archæological remains, it behoves learned societies to redouble their zeal and activity, to recognise the great value of these national monuments, and to solicit subventions from municipal administrations, Councils General, and the State."

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by persons of the humbler class might possess indeed no great value in the eyes of the antiquary, but they had an immense value for the moralist, and might well be regarded as tokens of a healthy progress in public feeling, and a return to a better order of things from those principles of universal destruction which tend to the annihilation of every old association and the severance of every link which binds us to the past. The hon. delegate was loudly applauded at the conclusion of his speech, of which our want of space compels us to give but a very brief outline.

M. Driolle, while admitting the importance of tempting the public of all nations to visit monuments of French architecture, could not but regard modern tourism as "one of the scourges of art!" He mentioned the Château de la Bride, the residence of Montesquieu, from which, as he had been assured by the proprietor, innumerable portable objects, such as locks, keys, nails, and other unconsidered trifles had been carried away by tourists.

M. de Gadebled condemned the spirit of "Art Centralisation" on which the collections of the Louvre were enriched at the expense of the provinces.

M. Calemard de la Fayette doubted whether the learned societies had as yet done all in their power towards bringing administrative effort to bear on the subject.

M. Bardy declared that administrative action was, in some cases, directly opposed to the preservation of monuments of art. In Poitiers, a town in which there exists a great love of art, the Amphitheatre, a well-preserved specimen, had been levelled to make room for a market-place. He considered it absolutely incumbent upon Government to keep in a state of preservation such world-wide monuments as the Palace of the Popes, at Avignon, and the house of Jacques Cœur, at Bourges.

We shall continue this notice of the proceedings in our next.

DESCRIPTIVE PARTICULARS OF THE REMAINS OF THE ABBEY OF KILCONNEL, IRELAND.*

AMONG the numerous tourists and archæologists who run round the country every year, there are but few who know that the West of Ireland, the county of Galway in particular, abounds with remains of the most important character, as exemplars of Ireland's only perfect style of Mediæval church building, and of its peculiarity as compared with the contemporary styles in England. From among these remains I have chosen the present for illustration, in consequence of their comparatively good state of preservation, and of their being perhaps the most peculiar in mass and detail.

Kilconnel, a village to which the Abbey gives its name, lies about 10 miles distant in a westerly direction from Ballinasloe, thirty from Tuam, and twenty from Loughrea. The country for very many miles round is comparatively flat: the tower consequently constitutes a very important feature in the landscape from numerous points of view. Like that of most of its class, the history of Kilconnel is scanty, being almost limited to local traditions. The name is derived from two Gaelic words, *Kil*, a burial-place, also cell, and *Chonaile*, or Connell, the name of the person who founded the Abbey in the territory of Minitch and Hyamen, and was a contemporary of St. Patrick. His establishment, however, soon came to an end; and in 1400 William O'Kelly erected a house here for Franciscans. On his death, in 1420, his son Malachy undertook a more extensive scheme, and completed the whole about the year 1460, to which period I consider that most of the present remains belong. It is recorded, that the supposition of James I. being favourable to the Roman Catholic cause occasioned most of the religious houses, not in too ruinous a state, to be repaired and reoccupied by monks or friars. Among them, up to the year 1604, we find the names of Multifernham, in Westmeath; Kilconnel, in Galway; Rossariel, in Mayo; Buttevant Kilkrea, and Timoleague, in Cork; Quin, in Clare; Garrinlough, in Desmona; with others in the cities of Waterford and Kilkenny. I find, however, no traces of repairs characteristic of this period at Kilconnel, and I am led to suppose that the works were confined to re-roofing some portions, and filling up the tracery of some of the windows with masonry in lieu of the original glass. An inventory of the Abbey while complete mentions, besides the church, a house called a "council house" [chapter house?], a chapel called "Tonhill Donelan's Chapel," six chambers with fireplaces, twenty-eight small chambers or dormitories, three orchards, six gardens, a mill and water-course, and sixty ash trees. Tradition points out the sight of the mill, but the watercourse must have been considerably diverted. Of the ash trees, one only remains, which, from its great size, must be of considerable age. It grows in a very extraordinary position within the walls, and against the east window of Tonhill Donelan's Chapel. The trunk, at the height of 6 or 8 feet, divides into two arms: one grows out through the window, the other upwards, but both unite their branches above the wall in one mass of foliage. The position of this tree fixes the ruin of the chapel at a remote period; even though the chapel is shown to be an addition to the original building, by its character, and by not being "tied" or "bonded" into the work of the transept. There is no doubt that Kilconnel Abbey, in its pristine condition, was a very important establishment in the West; and that it had many endowments from numerous ancient families about it, whose descendants are still existing. Many interesting reliques have been from time to time found in the locality, particularly in a small swamp or morass to the north of the abbey. It would appear, that at the destruction of the monasteries, the friars or monks took the precaution of concealing their valuables in the adjacent bogs, either on account of the supposed preservative qualities of the turf, or of their being secure from discovery by marauders. From this cause, no doubt, the small bog near the Abbey of Kilconnel retains to this day the cognomen of "Moan-na-mraihar," or "Friar's Bog," and various reliques of the old abbey have been found in it from time to time. Some years ago an ingot of fine gold of considerable value was dug up.

Like those of most communities of the class, the founders of this took good care to secure a spot where fuel and water were abundant. In addition to the excellent running stream alluded to, there is a spring to the north of the most exquisite quality. It is commonly called the "Lanthorn Well," but I find that the proper appellation is "Lanfiera's Well," the name, I should conjecture, of one of the abbots, or of a local saint. In most other western monasteries such springs are generally called "Holy Wells," and are commonly reported to possess healing qualities for all diseases.

The entire structure of Kilconnel Abbey is built in flat courses or layers of flint, and flags of various sizes and qualities, principally self-faced. It has as good an effect as the most perfect style of masonry. All the finer or wrought work is of the exceedingly hard limestone peculiar to Ireland, but found nearest to Kilconnel, at Brackerna, near Ballinasloe, about twelve miles distant. The very hard quality of this stone has allowed the highest finish to be given to all the work, and the greatest exactitude to every detail; while such is its state of preservation, that the chisel marks are as fresh as might be expected only a year after completion. The marks are very fine, in consequence of the sharpness of the tool required to disintegrate the stone; but they still remain, and with one exception where the stone is rubbed or polished, they form the finish of the work. Doubtless, the expense of first-class artisans to work this stone, and the labour and time it must have required, have occasioned the introduction of a small amount of ornament; but wherever it does appear, it bears the impress of masterly and free treatment. We cannot attribute the use of this very hard material to anything but the necessity of using local materials, but the result is forcibly in favour of hard stone in monumental buildings, with a small amount of ornament accurately finished, in preference to many ornaments badly executed in soft stone, and the consequence—early decay and premature destruction.

Every traveller who has given his ideas upon these structures has emphatically pronounced them to possess a very foreign aspect. Probably in none is this more evident than in Kilconnel, whether viewed in the mass or in the detail. One of its greatest peculiarities is (should my assumption of the date not be erroneous) that, while at the period of its erection Perpendicular Gothic was the only style practised in England (and to a far greater extent than the preceding ones), we do not find any evidence of the slightest influence of the English style or taste at Kilconnel, so far as broad principles give scope for consideration. But in France and other continental countries, where the Perpendicular never obtained proper hold, we find the same flowing style as that of Kilconnel, and just about the same period. The east window, the south transept, and the chancel windows are decidedly Flamboyant, and entirely devoid of any cusping. Of all the traceried windows, the south window of the aisle alone is cusped, and has any impress of English character; and this only if Mr. Garbet is correct in asserting, in his "Rudimentary Treatise," that the difference between our own flowing style and that of the Germans and French is, "that while the upper ends of our loops or leaves are round or simply pointed, *i.e.* with *finite angles*, the upper ends in France terminate like the lower, in *angles of contact*." The only English windows showing the same mode of treatment as this which I can call to mind, are the west window at York Minster, and a window in Kirton church, Lincolnshire. The square head Tudor looking windows in the aisle of the nave are very well executed, but too much frittered away in lines and small members. Another difference in respect to the windows is, that while in England they are generally recessed with a bold single or double chamfer, or otherwise more deepened and moulded, in Kilconnel they are fixed in every case within an inch, or an inch and half of the face of the wall, and sometimes flush with it. This I consider to be a decided fault; æsthetically, because it deprives the window of shadow necessary to give it boldness; and constructively, because it tends to expose it more to accident. Many of the windows have no splay inside. The three-light window above the eaves line in the south wall of the chancel must be a much later addition.

After a few leading elements in the nave and chancel, irregularity and want of symmetry seem to be prevailing features in Kilconnel Abbey.

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It would appear that the transept and aisles were a sort of after-thought in the erection of the main structure,—but that both were built during the same period cannot, I think, be for a moment doubted. Not so, however, with "Tonhill Donelan's" chapel. This certainly, as previously stated, must be an addition subsequent to the main erection. I presume that "Tonhill Donelan" erected this at first as a mortuary chapel, and that afterwards it was used, in conjunction with the transept and aisles, as a chapel for the general services; high mass and the more solemn ones being performed in the chancel. Squints in the side arches, now almost effaced, enabled the worshippers to participate more easily in the services at the altar at the east end. The piscina in this little chancel is of the most exquisite finish, and seems to be of a different material from the rest of the work; a sort of dark marble, which had at one time, no doubt, a fine polish. The arches have the same characteristic as those already mentioned, *i.e.* a near approach to the semicircle; and the pillar, its antæ and their capitals and bases, have very free and beautiful profiles. This piscina is, perhaps, one of the most finished and exquisite pieces of work in the whole fabric. Indeed, it is more reasonable to assume that it was removed from another site in the church and inserted here, than that it is of a contemporary style with Tonhill Donelan's addition. The other piscina in the transept also shows highly finished workmanship. There is little doubt, judging from the height of the east window above the floor line, and the racked appearance of the wall, that a reredos existed above the altar; but the place is now so encumbered with tombs and ruins, that it is impossible to arrive at any satisfactory conclusion. There is no trace left of sedilia or a piscina, in the chancel, though it, no doubt, possessed them; and the fact of two piscinas being found in one small chapel, made up of various parts into what might be termed the "Lady Chapel," leads to the conclusion, that the most important and solemn portion of the edifice would also possess these adjuncts to an extent commensurate with its importance.

The roof must have been an open timbered one; the stone corbels, of the plainest description, which supported the ribs, still remaining in many places, particularly in the chancel.

The distribution of the little amount of ornament to be seen is singularly peculiar. A few leaves are found on one of the main springing courses (and only on one) of the tower. An angel with a book supports one corbel only of one of the tower arches; and in one corner, above the springing of the arches, an owl is carved in bold relief, as if stuck against the wall. At the junction of the nave and transept aisle, is a springing stone of nearly the same profile as the more elaborate capitals in the transept, but having a

* The following is condensed from the paper for which, and its measured illustrations, the Silver Medal of the Institute of British Architects, with five guineas, was presented to Mr. James Blake, on Monday, 12th instant, as mentioned.

(117) "View from the Punta di Tragara, Capri," showing Monte Salaro and the town. Mr. Chase has some good architectural drawings, including (115) "Roslyn Chapel," and (162) "Hurstmonceux Castle." Mr. Edward Corbould gives an elaborate piece of antiquarianism, called "Noah, a Miracle Play performed in the Streets of Hull in the fourteenth and fifteenth Centuries." Mr. Tidey supplies Mr. Absolon's place with a large conversation picture, called "A Field-day in the Last Century." Mr. Wehnert, who is abroad, sends four small drawings of buildings in Florence, of great excellence,—Nos. 299, 305, 313, and 316. No. 6, "The Poissons Rouges," by E. Morin; (11) "The Stye Head Pass, Wastdale, Cumberland," by Jas. Fahey; (36) "Port of Carnarvon," by T. S. Robins; (69) "The Last Leap of the Lledr," by D. H. McKewan; (165) "Safe off the Rocks," by J. H. Mole, are good specimens of the several artists' work. Nearly fifty pictures were sold on the private-view day.

CONGRESS OF DELEGATES OF LEARNED SOCIETIES, UNDER THE DIRECTION OF THE INSTITUTE OF THE PROVINCES OF FRANCE.

PRESERVATION OF MONUMENTS.

WE gave some account in our last number, of the opening of this congress.

The three first questions coming under the head of archæology and the fine arts were,—

1. In what state are the epigraphic collections existing in different towns of France?

2. Is it not desirable to direct the attention of the Government to the little interest taken in many places in these precious historical monuments?

3. Is it not desirable that towns possessing inscriptions and ancient sculptures, but having no fitting locality in which to preserve them, should be obliged to construct cheap sheds (*hangars*), to preserve them from the effects of the rain and the frost?

M. de Caumont suggested that these three questions should be discussed together, so as to embrace the whole subject of the preservation of architectural and archæological remains in provincial towns. He observed that, although during the last twenty years artistic taste had greatly increased in the provinces, many fine remains had been destroyed, and become lost to the country, for want of a little ordinary care. He quoted a remarkable instance, which had recently occurred at Grenoble, a town by no means wanting in inhabitants of taste and learning. One of the professors of the college, passing along a street in which the foot pavement was under repair saw, among the large stones being thrown out of a cart, one on which was a Roman inscription. Having searched further, and found many others, he applied to the proper authorities, and was so fortunate as to save these appliances to art from the utilitarian purpose designed for them. Instead, however, of being carried to a fitting place, they were put away in the cemetery of St. Laurent, where the inscriptions could not but suffer from the damp. But in addition to the damp, another and a more terrible enemy met them. Monsieur le Curé declared that they took up so much space as to interfere with the ceremonies of public worship, and must be removed. What might have been their fate it is impossible to say, had not relief appeared in the shape of the Scientific Congress, which chanced to meet that year at Grenoble. The consequence was, a vote of 300 francs as the nucleus of a subscription for their preservation. Even at Bordeaux (where a sum of 200,000 francs has just been voted for a botanical garden) the Epigraphic collection—one of the richest in France—is greatly neglected, the inscriptions being placed in a room entirely deficient in accommodation for study. Epigraphic collections placed in open courts are liable to be broken, and injured by the weather. Admitting that it behoves the country at large to preserve these valuable monuments of history and art, how is that end to be attained? Who is to do it? Too much should not be asked, or nothing may be obtained. The evil is growing. The most obvious remedy appears to be temporary accommodation, which must not only be rapidly executed, but economical; and it was to this end that M. de Caumont suggested sheds. The expense can hardly be urged as an objection, since in few cases could it exceed 5,000 or 6,000 francs (200*l.* to 240*l.* sterling).

M. Bardy objected to sheds, upon the general principle that all such provisional measures tended to prevent effectual remedies. He thought the great hope was in the action of the parent society upon the numerous provincial societies, and through the latter upon the local authorities. It was necessary to encourage the search for the valuable architectural and archæological remains believed to be scattered over France.

M. Driolle thought the idea of *hangars* unworthy of art. He urged the adoption throughout the provinces of the system pursued in Paris, where inscriptions are encrusted in the walls.

M. Garinet was convinced of the great improvement in the public taste for antiquarian remains. Formerly, if a peasant found a bronze statuette or a number of coins, they would be sold to the melter. Now, such objects would surely find their way to collections of provincial amateurs. The clergy are more or less men of intelligence and taste; and they might be urged to keep all discoveries of ancient remains in view. He was opposed to the centralization of works of art. They could, in most cases, be beneficially allowed to remain as historical evidences and illustrations, near the spot on which they were found. Architectural monuments, fortunately, could seldom be removed.

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M. de Montreuil said the public support might easily be obtained for the preservation of architectural or archæological monuments, whether Roman or of the Middle Ages. He perceived, with pleasure, a revival of respect for the past among the people at large, for which thanks were mainly due to M. Caumont and the society over which he presided so ably. Mention had been made of the town of Gisors. He begged to remind the meeting that its ancient castle, built by William Rufus, and justly regarded as one of the most interesting remains in the country, had acquired additional celebrity from the fact that a museum had been formed within it. To this museum, moreover, contributions were continually sent, not by the learned and the wealthy alone, but by the small proprietor and the industrious peasant. He dwelt in eloquent language upon this latter theme. He was pleased, he said, to see that some of the good old blood yet flowed in popular veins, and that popular hearts had not entirely ceased to beat with just pride at great historical recollections. The medals and other objects sent

by persons of the humbler class might possess indeed no great value in the eyes of the antiquary, but they had an immense value for the moralist, and might well be regarded as tokens of a healthy progress in public feeling, and a return to a better order of things from those principles of universal destruction which tend to the annihilation of every old association and the severance of every link which binds us to the past. The hon. delegate was loudly applauded at the conclusion of his speech, of which our want of space compels us to give but a very brief outline.

M. Driolle, while admitting the importance of tempting the public of all nations to visit monuments of French architecture, could not but regard modern tourism as "one of the scourges of art!" He mentioned the Château de la Bride, the residence of Montesquieu, from which, as he had been assured by the proprietor, innumerable portable objects, such as locks, keys, nails, and other unconsidered trifles had been carried away by tourists.

M. de Gadebled condemned the spirit of "Art Centralisation" on which the collections of the Louvre were enriched at the expense of the provinces.

M. Calemard de la Fayette doubted whether the learned societies had as yet done all in their power towards bringing administrative effort to bear on the subject.

M. Bardy declared that administrative action was, in some cases, directly opposed to the preservation of monuments of art. In Poitiers, a town in which there exists a great love of art, the Amphitheatre, a well-preserved specimen, had been levelled to make room for a market-place. He considered it absolutely incumbent upon Government to keep in a state of preservation such world-wide monuments as the Palace of the Popes, at Avignon, and the house of Jacques Cœur, at Bourges.

We shall continue this notice of the proceedings in our next.

DESCRIPTIVE PARTICULARS OF THE REMAINS OF THE ABBEY OF KILCONNEL, IRELAND.*

Among the numerous tourists and archæologists who run round the country every year, there are but few who know that the West of Ireland, the county of Galway in particular, abounds with remains of the most important character, as exemplars of Ireland's only perfect style of Mediæval church building, and of its peculiarity as compared with the contemporary styles in England. From among these remains I have chosen the present for illustration, in consequence of their comparatively good state of preservation, and of their being perhaps the most peculiar in mass and detail.

Kilconnel, a village to which the Abbey gives its name, lies about 10 miles distant in a westerly direction from Ballinasloe, thirty from Tuam, and twenty from Loughrea. The country for very many miles round is comparatively flat: the tower consequently constitutes a very important feature in the landscape from numerous points of view. Like that of most of its class, the history of Kilconnel is scanty, being almost limited to local traditions. The name is derived from two Gaelic words, *Kil*, a burial-place, also cell, and *Chonaile*, or Connell, the name of the person who founded the Abbey in the territory of Minitch and Hyamen, and was a contemporary of St. Patrick. His establishment, however, soon came to an end; and in 1400 William O'Kelly erected a house here for Franciscans. On his death, in 1420, his son Malachy undertook a more extensive scheme, and completed the whole about the year 1460, to which period I consider that most of the present remains belong. It is recorded, that the supposition of James I. being favourable to the Roman Catholic cause occasioned most of the religious houses, not in too ruinous a state, to be repaired and reoccupied by monks or friars. Among them, up to the year 1604, we find the names of Multifernham, in Westmeath; Kilconnel, in Galway; Rossariel, in Mayo; Buttevant Kilkrea, and Timoleague, in Cork; Quin, in Clare; Garrinlough, in Desmona; with others in the cities of Waterford and Kilkenny. I find, however, no traces of repairs characteristic of this period at Kilconnel, and I am led to suppose that the works were confined to re-roofing some portions, and filling up the tracery of some of the windows with masonry in lieu of the original glass. An inventory of the Abbey while complete mentions, besides the church, a house called a "council house" [chapter house?], a chapel called "Tonhill Donelan's Chapel," six chambers with fireplaces, twenty-eight small chambers or dormitories, three orchards, six gardens, a mill and water-course, and sixty ash trees. Tradition points out the sight of the mill, but the watercourse must have been considerably diverted. Of the ash trees, one only remains, which, from its great size, must be of considerable age. It grows in a very extraordinary position within the walls, and against the east window of Tonhill Donelan's Chapel. The trunk, at the height of 6 or 8 feet, divides into two arms: one grows out through the window, the other upwards, but both unite their branches above the wall in one mass of foliage. The position of this tree fixes the ruin of the chapel at a remote period; even though the chapel is shown to be an addition to the original building, by its character, and by not being "tied" or "bonded" into the work of the transept. There is no doubt that Kilconnel Abbey, in its pristine condition, was a very important establishment in the West; and that it had many endowments from numerous ancient families about it, whose descendants are still existing. Many interesting reliques have been from time to time found in the locality, particularly in a small swamp or morass to the north of the abbey. It would appear, that at the destruction of the monasteries, the friars or monks took the precaution of concealing their valuables in the adjacent bogs, either on account of the supposed preservative qualities of the turf, or of their being secure from discovery by marauders. From this cause, no doubt, the small bog near the Abbey of Kilconnel retains to this day the cognomen of "Moan-na-mraihar," or "Friar's Bog," and various reliques of the old abbey have been found in it from time to time. Some years ago an ingot of fine gold of considerable value was dug up.

Like those of most communities of the class, the founders of this took good care to secure a spot where fuel and water were abundant. In addition to the excellent running stream alluded to, there is a spring to the north of the most exquisite quality. It is commonly called the "Lanthorn Well," but I find that the proper appellation is "Lanfiera's Well," the name, I should conjecture, of one of the abbots, or of a local saint. In most other western monasteries such springs are generally called "Holy Wells," and are commonly reported to possess healing qualities for all diseases.

The entire structure of Kilconnel Abbey is built in flat courses or layers of flint, and flags of various sizes and qualities, principally self-faced. It has as good an effect as the most perfect style of masonry. All the finer or wrought work is of the exceedingly hard limestone peculiar to Ireland, but found nearest to Kilconnel, at Brackerna, near Ballinasloe, about twelve miles distant. The very hard quality of this stone has allowed the highest finish to be given to all the work, and the greatest exactitude to every detail; while such is its state of preservation, that the chisel marks are as fresh as might be expected only a year after completion. The marks are very fine, in consequence of the sharpness of the tool required to disintegrate the stone; but they still remain, and with one exception where the stone is rubbed or polished, they form the finish of the work. Doubtless, the expense of first-class artisans to work this stone, and the labour and time it must have required, have occasioned the introduction of a small amount of ornament; but wherever it does appear, it bears the impress of masterly and free treatment. We cannot attribute the use of this very hard material to anything but the necessity of using local materials, but the result is forcibly in favour of hard stone in monumental buildings, with a small amount of ornament accurately finished, in preference to many ornaments badly executed in soft stone, and the consequence—early decay and premature destruction.

Every traveller who has given his ideas upon these structures has emphatically pronounced them to possess a very foreign aspect. Probably in none is this more evident than in Kilconnel, whether viewed in the mass or in the detail. One of its greatest peculiarities is (should my assumption of the date not be erroneous) that, while at the period of its erection Perpendicular Gothic was the only style practised in England (and to a far greater extent than the preceding ones), we do not find any evidence of the slightest influence of the English style or taste at Kilconnel, so far as broad principles give scope for consideration. But in France and other continental countries, where the Perpendicular never obtained proper hold, we find the same flowing style as that of Kilconnel, and just about the same period. The east window, the south transept, and the chancel windows are decidedly Flamboyant, and entirely devoid of any cusping. Of all the traceried windows, the south window of the aisle alone is cusped, and has any impress of English character; and this only if Mr. Garbet is correct in asserting, in his "Rudimentary Treatise," that the difference between our own flowing style and that of the Germans and French is, "that while the upper ends of our loops or leaves are round or simply pointed, *i.e.* with *finite angles*, the upper ends in France terminate like the lower, in *angles of contact*." The only English windows showing the same mode of treatment as this which I can call to mind, are the west window at York Minster, and a window in Kirton church, Lincolnshire. The square head Tudor looking windows in the aisle of the nave are very well executed, but too much frittered away in lines and small members. Another difference in respect to the windows is, that while in England they are generally recessed with a bold single or double chamfer, or otherwise more deepened and moulded, in Kilconnel they are fixed in every case within an inch, or an inch and half of the face of the wall, and sometimes flush with it. This I consider to be a decided fault; æsthetically, because it deprives the window of shadow necessary to give it boldness; and constructively, because it tends to expose it more to accident. Many of the windows have no splay inside. The three-light window above the eaves line in the south wall of the chancel must be a much later addition.

After a few leading elements in the nave and chancel, irregularity and want of symmetry seem to be prevailing features in Kilconnel Abbey.

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It would appear that the transept and aisles were a sort of after-thought in the erection of the main structure,—but that both were built during the same period cannot, I think, be for a moment doubted. Not so, however, with "Tonhill Donelan's" chapel. This certainly, as previously stated, must be an addition subsequent to the main erection. I presume that "Tonhill Donelan" erected this at first as a mortuary chapel, and that afterwards it was used, in conjunction with the transept and aisles, as a chapel for the general services; high mass and the more solemn ones being performed in the chancel. Squints in the side arches, now almost effaced, enabled the worshippers to participate more easily in the services at the altar at the east end. The piscina in this little chancel is of the most exquisite finish, and seems to be of a different material from the rest of the work; a sort of dark marble, which had at one time, no doubt, a fine polish. The arches have the same characteristic as those already mentioned, *i.e.* a near approach to the semicircle; and the pillar, its antæ and their capitals and bases, have very free and beautiful profiles. This piscina is, perhaps, one of the most finished and exquisite pieces of work in the whole fabric. Indeed, it is more reasonable to assume that it was removed from another site in the church and inserted here, than that it is of a contemporary style with Tonhill Donelan's addition. The other piscina in the transept also shows highly finished workmanship. There is little doubt, judging from the height of the east window above the floor line, and the racked appearance of the wall, that a reredos existed above the altar; but the place is now so encumbered with tombs and ruins, that it is impossible to arrive at any satisfactory conclusion. There is no trace left of sedilia or a piscina, in the chancel, though it, no doubt, possessed them; and the fact of two piscinas being found in one small chapel, made up of various parts into what might be termed the "Lady Chapel," leads to the conclusion, that the most important and solemn portion of the edifice would also possess these adjuncts to an extent commensurate with its importance.

The roof must have been an open timbered one; the stone corbels, of the plainest description, which supported the ribs, still remaining in many places, particularly in the chancel.

The distribution of the little amount of ornament to be seen is singularly peculiar. A few leaves are found on one of the main springing courses (and only on one) of the tower. An angel with a book supports one corbel only of one of the tower arches; and in one corner, above the springing of the arches, an owl is carved in bold relief, as if stuck against the wall. At the junction of the nave and transept aisle, is a springing stone of nearly the same profile as the more elaborate capitals in the transept, but having a

* The following is condensed from the paper for which, and its measured illustrations, the Silver Medal of the Institute of British Architects, with five guineas, was presented to Mr. James Blake, on Monday, 12th instant, as mentioned.

running *fleur-de-lis* on the frieze. In other places small scroll devices, little bits of leaves, &c. are found.

The tower is a remarkably strong and solid structure, the walls retaining their thickness for nearly the whole height. The floor is nicely drawn to the square by a series of discharging arches—the groined ceiling under is of excellent workmanship and finish, having no bosses at the intersections of the ribs, which are too often the means of concealing indifferent work. The whole is well done, and "line meets line" with geometrical exactness. The stepping in of the upper portion of the tower leaves considerable spaces outside to the north and south—these are but very slightly weathered, and in so peculiar a manner as to render their use a mystery. The weather stones, each in two steps, are hollowed considerably in the middle in the direction of the drip, so as to resemble tiles; and each of the platforms has a door at about its own level, but about 6 feet above the floor in the tower—its purpose I am unable to conjecture. The most remarkable feature in these monastic towers, all of which in some measure resemble the one in question, is the termination, which entirely differs from anything of the kind in Great Britain. All those I have seen are finished in the same way, or at least on the same principle. Those of Jerpoint, Castle Galway, and Abbey Knocking may be cited as instances. Above the top string course (it cannot be called a cornice) is a series of oblong holes through the parapet, carrying the water from the roof to the drip of the string course. These, at some little distance, produce almost the effect of large denteles reversed, and give a peculiarly pleasing weight and importance to the upper portion and battlements. Such battlements, according to Fergusson, are identical with many found in the north of Italy. * * *

The abbey, in its finished condition, must have possessed many splendid monuments and tombs, but most of them, from wilful destruction or neglect, are entirely defaced. That in the nave, however, near the west door, would be found, were the ivy removed, to be in a tolerably good state of preservation. The altar part of this tomb I should consider, from the character of the figures, to be a century or more earlier, but the canopy and its adjuncts belong to the date of the present church; and if the lower part is older, it has most likely been transferred from some older structure that occupied the same site. The canopy is a splendid piece of workmanship of very delicate finish and adjustment. Fault may be found with the multitude of small members into which it is cut up by the alternate hollow and round mouldings, but the accuracy with which these members are mitred upon spherical lines, deserves great commendation. The character of the tracery is as Flamboyant as anything in France or Germany, and certainly different from anything of the kind in England that I am aware of. There is no history of this tomb extant: it belongs to the "Keogh" family, and is commonly called "Miss Keogh's tomb."

In conclusion, I venture to express my opinion that the architects of all these western monasteries, Kilconnel in particular, were either foreigners, or that, if natives, they studied in foreign countries, and thence imported the style into Ireland. The latter opinion is, perhaps, the more correct, as it is very probable that, as in England, the bishops and clergy of the Middle Ages in Ireland were their own architects; and it is well known that students from Ireland went into Italy and Spain to be ordained, where it is not improbable that they studied the elements, and imbibed the principles of architecture, which they subsequently transferred to their native country. Indeed, not only in the style of architecture here treated, but in all the Irish architecture of a much more ancient date, is this foreign influence always to be remarked. English feeling, or the influence of English style, is not apparent in either. This would not be so much matter for surprise, notwithstanding the close proximity of the two islands, had there been no connection between them in an imperial point of view; but when we find that, at the period to which these remarks especially apply, Ireland was under the almost absolute domination of the English, it must be considered remarkable that some English spirit was not infused into the vernacular architecture of the country, more particularly at that advanced age. On the other hand, when we remember that the Irish chieftains and their followers never could brook the yoke of their English subduers, and that at the time Kilconnel and like abbeys were built, that is, the commencement of the fifteenth century, the country was subject to serious and continual disturbances, we may understand the reasons which may have prevented the adoption of any English type. Again, we find in almost all other countries contiguous to each other, foreign influence apparent in some shape or other. Thus, in France, we occasionally find German influence, and *vice versâ*. In Spain, we find French influence, and in Italy we find even English influence. But in Ireland, at a short distance across a narrow channel, where English influences in other respects prevailed, and where, according to Hardiman and Debrett, some of the founders of these western monasteries must have been of Anglo-Saxon blood, there is scarcely anything to indicate the union of the two countries,—while there is everything characteristic of the spirit and thought of more distant climes and more foreign influences.

There are many abbeys in the counties of Galway, Mayo, and Clare, which, if properly investigated, might throw much light upon a mystery hitherto not fathomed. It would be very interesting to the antiquary to discover some definite reason for the southern influence prevailing in the Mediæval architecture of the sister isle; and why she should, in that respect, be so much alienated from this country, with which she was otherwise so nearly connected. There is food enough for the archæologist among these ancient structures to enable him at least to arrive at a conclusion whether their characteristics are entirely foreign, or whether they were, in any degree, affected by the influence of Great Britain.

THE ADORNMENT OF THE INTERIOR OF ST. PAUL'S CATHEDRAL.

A STRONG wish having been expressed in various quarters that the interior of St. Paul's Cathedral should be thrown open for evening services similar to those at Westminster Abbey, Dr. Milman, the Dean of St. Paul's, in a long and earnest letter to the Bishop of London on the subject, mentions the peculiar circumstances that prevent the dean and chapter from incurring the expense of 1,000*l.* which would be required to carry out this intention, even in the most homely manner. It appears that this cathedral, having been built partly by national subscriptions and partly by a duty on coals, only a very limited annual sum is set apart for necessary repairs; and it is thought creditable to the architect and all concerned that so much has been done with little means.

The dean says:—"The smallest sum for which such a work can be accomplished, as I have said, in a temporary and unadorned way, would be at least 1,000*l.* But I confess that I should be deeply grieved to see such works executed in a manner unsightly, unbecoming so noble an edifice, almost irreverent. For it is not for those especial services alone that the fitting up of the space under the dome is imperatively required.

Our afternoon service has far outgrown the narrow limits and unsatisfactory accommodation of the choir. By opening the iron gates, we have admitted to some partial hearing—of the music at least—several hundreds of persons who were precluded, from want of room, from becoming worshippers and hearers within. The ample space, if properly arranged and adapted for choral service, would, I am persuaded, be filled, and the congregation doubled; for the area which we contemplate opening would accommodate at least 2,500 persons."

Dr. Milman, after some remarks on his anxiety to improve the present "cold, dull, unedifying, unseemly appearance of the interior," says,—"That exterior, I presume to say, from its consummate design in its style of architecture, is the noblest church in Christian Europe,—the masterpiece of our great British architect, Sir Christopher Wren,—the glory,—it should be the pride, of the city of London,—of the Christian people of the realm. I should wish to see such decorations introduced into St. Paul's as may give some splendour, while they would not disturb the solemnity or the exquisite harmonious simplicity of the edifice;—some colour to enliven and gladden the eye from foreign or native marbles—the most permanent and safe mode of embellishing a building exposed to the atmosphere of London. I would see the dome, instead of brooding like a dead weight over the area below, expanding and elevating the soul towards heaven. I would see the sullen white of the roof, the arches, the cornices, the capitals, the walls, broken and relieved by gilding,—as we find, by experience, the most lasting as well as the most appropriate decoration. I would see the adornment carried out in a rich but harmonious, and as far as possible from gaudy, style, in unison with our simple form of worship.

If instead of 1,000*l.* for temporary, mean, and unbecoming fittings, we could command 11,000*l.* or 12,000*l.* not merely may our purpose of adapting the dome area for public service be fully and creditably carried out, but something at least would be done towards the general adornment of the cathedral. The large estimate would comprehend a complete and effective plan for warming as well as lighting the church, and also either an enlargement of the present or the providing another organ.

I cannot think this an exorbitant sum to be expended on the metropolitan church of this opulent city,—on the last resting-place of so many of our greatest heroes, statesmen, men of letters, and of arts,—the centre, if I may so speak, of the Christian worship of the land. When I see the enormous sums lavished on buildings for the purposes of trade, some soaring in their disproportioned height, in the neighbourhood of the cathedral—when I contemplate the costliness of private mansions—the prodigal expenditure on buildings for the purposes of amusement, or for the grave and more important affairs of public state and business, I cannot but think it time that the metropolitan church should share in the general munificence and general liberality."

We believe that few of our readers will differ from the sentiments expressed by the Dean of St. Paul's, and hope that a well-arranged appeal will be made to the British public for funds for the purpose of adding to the beauty of this truly national monument, which is not only a crowning glory to the metropolis, but also the boast of the country at large. The interior of St. Paul's is a splendid opportunity for the display and promotion of high and true art; and we feel sanguine that if it were generally understood that a sum of 20,000*l.* or 30,000*l.* would be the means of adding materially to the beauty of Sir Christopher Wren's work, the amount would be speedily collected. A great deal might be done by a simultaneous appeal to the congregations of the churches, not only of the metropolis, but also of those throughout the country.

In carrying out any extensive works of adornment, the glazing of the windows, in a proper manner, with coloured glass, would, of course, not be omitted.

The Bishop of London and the Dean of St. Paul's have opened a subscription with 100*l.* each, to which Canons Dale, Champneys, and Archdeacon Hale offer 50*l.* each.

AMERICAN INSTITUTE OF ARCHITECTS.

THE first annual dinner of the American Institute of Architects came off on the 22nd of February (Washington's birthday). There were present some twenty architects, of the city of New York, belonging to the Institute. After doing justice to the dinner provided for the occasion, Mr. Richard Upjohn, the president, read an address, urging the advantages of union and organization.

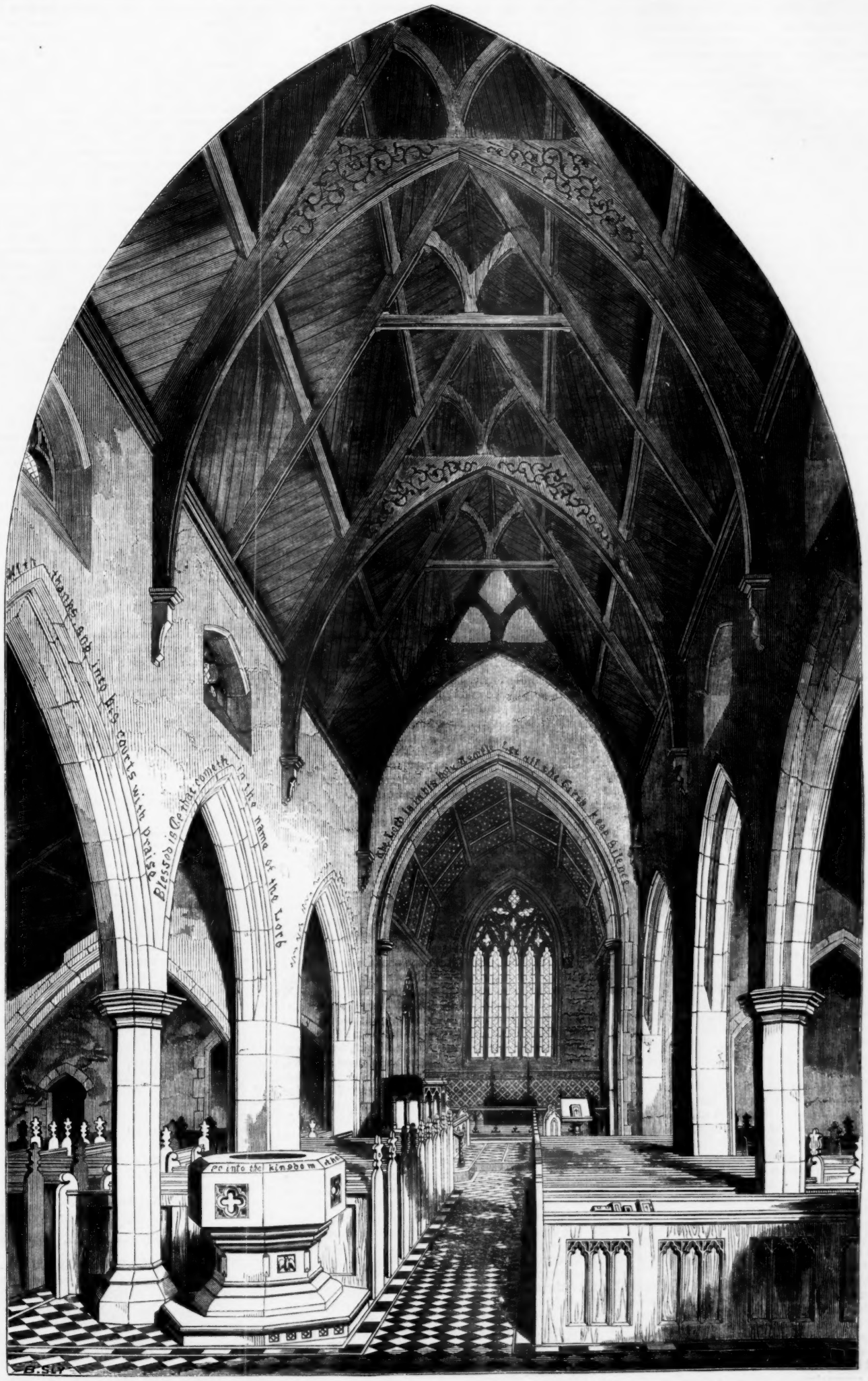
Mr. Leopold Eidlitz, after an interesting speech in reply to the toast, "The Day we celebrate," proposed, "The pioneer of American art—our president. May he live long to guide us by his example as an artist and as a man."

In reply to "The country we live in," Mr. Rich said,—While Europe had her patrons of art in her sovereigns and the nobility, the American people would yet encourage art as it never had been encouraged before. Their desire for development of taste was so great, that they were apt to rush into extravagancies: all they needed was advice and instruction in the right direction, which he hoped the American Institute of Architects would make it their duty to afford them, and he was confident it would be appreciated and rewarded by the community at large.

ST. PAUL'S CHURCH, YORKVILLE, TORONTO.

THE mother is interested in the progress of her children. The annexed engraving of St. Paul's church, Yorkville, erected under the superintendence of Messrs. G. K. and E. Radford, architects, will serve to show what is being done at Toronto, in the way of church building, and may well be termed satisfactory. It is a cross church, and has a bell-tower and slender spire at the north-west angle of the north transept. The material used is white brick, with stone facings. The cost has been about 4,000*l.*

THE FRENCH GALLERY.—The fifth annual exhibition of works by artists of the French School has been opened at the French Gallery in Pall-mall.



ST. PAUL'S CHURCH, YORKVILLE, TORONTO.—Messrs. G. K. and E. Radford, Architects.

CHURCH BUILDING NEWS.

Sanderingham (*Norfolk*).—The church here, with its fine old oak roof, has been entirely restored, and new oak fittings provided in the place of unseemly boxes. The chancel windows are all filled with painted glass, by Mr. Clayton, who has now in hand two more for the nave. Over the entrance to the porch, in a niche, is a figure of the Virgin and child. A litch-gate is now being erected at the south-east entrance to the churchyard. The whole has been done under the direction of Mr. S. S. Teulon, by Mr. Wm. Brown, of Lynn, builder.

Kennett (*Cambridgeshire*).—The present owner of this parish, the Rev. W. Godfrey, is carrying out a general restoration of the tower, nave, aisle, and chancel of his church, by expending a liberal sum yearly. The chancel is now undergoing restoration, and is to have a new roof, boarded and covered with Westmorland slates. There is a triplet at the east end, in a very decayed state, which is to be carefully reinstated. Mr. G. E. Pritchett is the architect, and Mr. Wm. Brown, of Lynn, is the builder now employed upon the chancel.

Panfield (*Essex*).—The parish church of Panfield, the nave of which has lately been reseated, at the expense of the rector, is about being still further restored and enlarged by the same liberal hand. The works in progress comprise the external restoration of the nave, new east window of five lights, new fittings to chancel, and new chancel aisle for school-children. The east window will be filled with cartoon glass, by Lavers. Messrs. Evans, Brothers, of London, are the contractors for the work; from designs by Mr. Withers, architect. The carving will be by Mr. H. Earp.

Seven Oaks.—The foundation-stone of a chapel of ease has been laid at this place, by the daughter of the Rev. Thos. Curteis, the rector. The land has been presented by the Marquis Camden. The contract has been taken by Mr. Punnett, of Tonbridge, at the sum of 840*l.* exclusive of the stone and interior fittings. The architects are Messrs. Morphew and Green.

Stoke.—The restoration of Stoke church has been carried out under the superintendence of Mr. J. B. Clacy, of Reading, architect. The contractor for the works was Mr. Thomas, of Abingdon.

Plumstead (*Kent*).—This once comparatively retired and thinly-populated village, having, from the increased railway and general traffic through Woolwich and its vicinity, largely added to the number of its buildings, and received a large accession to its population, arrangements have been made for the erection of a new church, for which the design of Mr. Rickwood, architect, has been approved. A contract has been entered into with Messrs. Piper and Son, builders. The church will be dedicated to St. Margaret.

Tremaen (*Cardiganshire*).—The little village church built here some few years since is about to receive some new chancel-stalls and prayer-desk, together with other fittings, from the design of Mr. Withers.

Tunstall.—The new chancel of Kidsgrove Church, erected at the sole cost of Mrs. Kinnersly, of Clough Hall, as a memorial of her late husband, the founder of the church, was to be opened and consecrated on the 7th inst. The chancel has been erected from designs by Mr. Scott. The reredos is of alabaster, the window of stained glass, the floor of marble and encaustic tiles, and the fittings of carved oak.

Babworth.—It has been decided to carry out the restoration of the church here. Mr. Pearson, architect, London, has been called on to prepare the plans and working drawings.

Kilnhurst.—The foundation-stone of a new church, to be called St. Thomas's Church, and which is in progress of erection at Kilnhurst, near Swinton, has been laid. The church, it is expected, will cost about 1,400*l.* The style is Early English, with bell turret. It will accommodate 350 people and 50 school children: it is not intended to erect galleries. Messrs. Pritchett and Son, of York, are the architects; and Messrs. Chadwick, of Masbro', contractors, for the stone-work.

East Retford.—A stained-glass window has been placed in the north side of the chancel of the parish church of East Retford, as a memorial, on the departure from Retford to India, as a missionary, of the Rev. W. A. Plumptre, the late curate. The top tracery is filled up on a crimson and blue ground, with floriated designs in gold, and the compartments compose a representation of the offerings from the wise men in the East on the birth of Christ at Bethlehem. Above the whole is a canopy with the star of Bethlehem and the sky set out. At the background a castellated building is shown: on the foreground, as a contrast, and in a stable, are the Virgin with the infant Jesus on her knees, as she sits on a hassock of straw, with Joseph at the back looking on. There has also been placed in the tracery of the fourth window of the north aisle a quantity of stained glass. The centre piece exhibits a monogram, "I.H.S." on a blue ground, in deep coloured gold, surrounded with foliage. Nine pieces of the tracery are arranged below in floriated designs of different colours. Mr. David Evans, of Shrewsbury, was the artist. Mr. S. H. Davies, plumber and glazier, fixed the window and tracery gratuitously.

Laneham.—Measures are being taken to obtain funds for the restoration of the parish church of Laneham, Notts. The edifice is of Norman architecture. The interior is in a shocking condition, although the walls are good and substantial.

Newton-le-Willows.—A stained glass window has just been placed in St. Peter's church by the Rev. Peter Legh, the incumbent, in memory of his deceased wife, Emily East Legh. It is a medallion window containing three subjects, viz.:—In the centre is represented the Good Shepherd: above is the raising of Jarius's daughter by our Lord; and below, St. Peter is represented raising Tabitha. Between each medallion and above each subject are two angels, one on each side, bearing scrolls, on which are written suitable texts. At the bottom of the window is the inscription. Messrs. Edmondson and Son, of Manchester, designed and executed this window. They have also been commissioned to get up a similar window for the same church,—a memorial to the incumbent's brother.

Poynton.—Workmen have been engaged in taking down the old Episcopal Chapel at Poynton, which was in a very dilapidated and dangerous state. The *débris* having been removed, arrangements, we believe, have been made for laying the foundation-stone of a new church. The style of the building, to be erected on the old site, will be similar to that of the new church at Alderley; and the design and plans have been furnished by Mr. Crowther, of Manchester, architect.

Bacup.—A new Zion Chapel has been opened at Bacup. The erection is in the Norman style of architecture, and is capable of seating 750 persons, the inside measurement being 68 feet by 42 feet. The height from the floor to the ceiling is 30 feet. The chapel is lighted from the ceiling. Instead of a pulpit, a permanent platform has been erected, large enough to accommodate a dozen persons. Below the chapel is a room designed for a Sunday school. It is 58 feet long and 42 feet wide. The height from floor to ceiling is 11 feet. The school is adapted for 500 children. The cost of erection is 2,630*l.* towards which 1,400*l.* have been raised by subscription.

CHURCH-BUILDING IN IRELAND.

Portlan, County Waterford.—A new (R.C.) church has been commenced here. The plan consists of nave, aisles, chancel, and side chapels, north and south porches, sacristy on the south side of one of the lateral chapels, and bell-turret on the north-west angle of nave. The style is Early English, and materials rubble of the grit stone of the district, with dressings and internal pillars and arches of granite from Bagenalstown. Total length in clear, 109 feet; width, 60 feet; height, to ridge of nave roof, 59 feet; height of bell-turret, 87 feet. Contractor, Mr. Richard Pierse, of Wexford. Amount of expenditure, exclusive of interior finishings, 2,300*l.*

The (*R.C.*) *Church of Tralee.*—Considerable alterations and additions have been in progress in this church during the last nine or ten months. They consist in enlarging the church in an eastern direction, by building a spacious chancel of three bays in length, with side aisles terminating in chapels, a lateral choir situated beyond the northern side chapel, for the use of the nuns of the adjoining Presentation convent, and a large sacristy on the south side. The roof of the old nave and transept to be removed, a new clerestory built, and a tower and spire are to be added to the west end of the nave. The east end of the chancel has a window of seven lights, with tracery. Those of the side chapels are three-light windows, with tracery. The materials are red sandstone of the neighbourhood and limestone dressings. The style is the Decorated. The contractor is Mr. B. Sweeney, of Tralee.

Killarney Cathedral.—One of the side chapels of this cathedral has been fitted up, as a memorial of the late Bishop Egan, with an altar and reredos, stained-glass window, monumental brass laid on the floor; the remainder of the floor filled with Minton's encaustic tiles. The altar and reredos were executed by Messrs. Lane and Lewis, of Dublin and Birmingham; the stained glass and metal-works, by the Messrs. Hardman and Co. of Grafton-street, Dublin, and Birmingham. The altar for the Blessed Sacrament Chapel has been contracted for by Messrs. Lane and Lewis. The Kenmare chantry is about being finished, at the expense of the Earl of Kenmare and his family. The decorations of the walls and ceiling, and the stained glass, are to be executed by Mr. Frederick S. Barff, M.A. of Dublin, the decorator of the Metropolitan Cathedral.

Enniscarthy Cathedral.—The interior finishing of this cathedral has been commenced. The great seven-light and traceried window of the chancel is being filled with stained glass,—representing our Lord, the Blessed Virgin, St. Joseph, and the Patron Saints of nearly all the parishes in the diocese of Ferns,—by Messrs. Hardman. Another window is being put up in the south aisle, as a memorial of the late Bishop Murphy. The high altar, pavement of chancel-floor, &c. are being executed by Messrs. Lane and Lewis.

Carmelite Church, Whitefriar-street, Dublin.—An aisle has been built on the north side of this church. It is in the Italian Romanesque style, resembling that of San Miniato, near Florence. The windows are arranged in semicircular-headed triplets, with internal jamb-shafts, curved capitals, and moulded and carved arches. The roof is open, and will be decorated in colours. Six bays of the aisles were built last year: the remaining two are now to be added. The exterior is calp, with granite dressings; the interior, Caen stone. Mr. Robert Farrell is the contractor. A large addition is being built to the priory. Mr. John Rooney, of Dublin, is the contractor. Mr. J. J. M'Carthy, M.R.I.A. is architect to the foregoing.

New (*R. C.*) *Church of St. Augustine, Galway.*—This church, now nearly completed, consists of nave, aisles, channel, and side chapel, with lofty tower and spire. The style throughout is Early English. The dimensions in the clear are 120 feet in length by 60 feet wide. The aisles are separated from the nave by an arcade of seven arches, springing from octagon piers of highly-polished limestone, surmounted by moulded capitals of the same material. The chancel and side chapels are separated from the nave and aisles by equilateral arches, the floors of which are to be raised three steps higher than that of the nave, and paved with encaustic and other tiles, from the works of Messrs. Maw and Co. The nave is lighted by a triple lancet in front, and clerestory single lights. The roof of chancel is lower than that of the nave. The material of walling is limestone, with chiselled dressings of the same. Probable cost, 7,000*l.* Mr. M. B. Moran, of Dublin, is the architect.

New Church of Ballyroughan, County Clare.—The plan consists of nave, 80 feet by 36 feet; chancel, 25 feet by 20 feet, separated from the nave by an arch, with soffit moulding springing from moulded corbels of polished marble. The principal entrances are on the west end and lower stage of tower on the north side. The nave is lighted by a triple lancet at the west end, and long and narrow single lights on the sides. A two-light window, filled with stained glass, dedicated to the Blessed Virgin, will stand outside the chancel on the south side, rising into the roof, with gable; the spandril between the heads of lights to be pierced, and the whole connected by label moulding. The angles of nave and chancel are decorated with buttresses. The turret and spire will be 72 feet to the top of the cross. All the gables are to be surmounted by the emblem of Christianity. The material to be used is limestone; the floor of chancel to be paved with tiles from the works of Messrs. Maw and Co. Style, Early Gothic. Probable cost, 2,500*l.* Mr. M. B. Moran is the architect.

Ailgate, County Wexford.—A new church is also about to be erected here, from plans by the same architect.

VENTILATION OF GUY'S HOSPITAL.*

ATTENTION having lately been prominently directed to the sanitary condition of hospitals, it may be useful to give a brief description of the system of ventilation and warming adopted in the new buildings of Guy's Hospital, and which has now been in use nearly five years.

The new buildings, of which the centre and southern wing were erected in 1852, from the designs of Mr. M. Rhode Hawkins, form an important addition to this munificent foundation. The structure comprises a central hall and spacious staircase, which, when the whole is completed, will give access to six wards for patients, arranged three

* The following, which is the result, we are informed, of a large number of observations and experiments, is to be received as the statement of the writer.—ED.

on each side of the centre. The centre is flanked by two square towers, surmounted by octagonal turrets, which act as fresh air-shafts, to supply air to the building. In the rear is a lofty square tower, surmounted by an octagonal lantern and spire of open ironwork. This tower is the extraction or ventilating shaft, and receives the vitiated air from the wards as well as the smoke from the furnaces and fireplaces. There are no chimney-stacks in the building. The structure is five stories high. On the ground-floor are situated the receiving-rooms for out-door patients, men's and women's dressing-rooms, bath-rooms, physicians' and surgeons' consulting-rooms, dispensary, laboratories, physicians' and surgeons' private rooms, dentist's room, apartments for the laboratory attendant, &c. The first, second, and third floors form three wards, arranged on a uniform plan, and comprising within each ward four large divisional or sub-wards, each 70 feet long, 21 feet wide, and 14 feet high; and a spacious day-room, 48 feet by 30 feet, situated at the intersection of the four divisional wards, with private rooms for the Sisters, lavatory, bath-room, scullery, water-closet, and store-rooms, opening out of it. Each division has also its own water-closet, the latter being in almost all cases external to the ward.

The number of in-door patients accommodated in the wing already erected is 150, or fifty to each ward on the first, second, and third floors; the sub-wards containing twelve and thirteen beds alternately. There are six attendants to each ward, viz. two sisters and four nurses.

The cubic space allotted to each patient in the wards averages from 1,600 to 1,700 cubic feet.

On the top floor are dormitories for the nurses and other attendants.

The whole of the building, with the exception of the central hall and great staircase, and some of the officers' apartments on the ground-floor, is artificially warmed and ventilated. The cubic content of the spaces so warmed and ventilated is 500,000 feet.

Of the above there are 110,000 cubic feet in the various apartments on the ground-floor, about 105,000 cubic feet in each ward, and 75,000 cubic feet in the dormitories, &c.

In the system of ventilation adopted, the fresh air taken from a high level, in order to ensure greater purity, descends by the fresh-air shafts to the basement, where it is conducted by horizontal channels parallel to the main walls, to the lower openings of vertical air-flues carried up in the thickness of the walls to the different stories. Along the sides of the fresh-air channels hot-water pipes are laid, which warm the air in winter, every flue being thus supplied with air warmed by contact with heating surfaces placed wholly in the basement. Corresponding flues conduct the vitiated air from each floor to a main vitiated air-trunk in the roof, terminating in the lofty ventilating tower at the rear of the central hall, the air of which is rarified by the waste heat from the furnaces of the hot water and steam-boilers.

The system of constant ventilation thus established, is perfectly independent of the obvious means of ventilating the wards, when the weather permits of the windows being opened. In the construction of the wards, express reference has been had to obtaining all the advantages derivable from what is called *natural* ventilation. The divisional wards are placed in pairs, side by side, so that a wall running down the centre of the building separates the divisions. Each division has windows on one side only, but there are large arched openings in the central wall, by which a thorough current of air can pass across both divisions, when the windows are set open, just as if each division had windows on both of its sides. The windows are hung to open as ordinary sashes, and the opening of them does not prejudice or derange the system of constant ventilation.

The constant summer ventilation of the building is calculated to afford a supply of 70 cubic feet and upwards, of fresh air for every patient. In winter the supply of fresh air is regulated so as to combine the preservation of an efficient rate of ventilation with an economical management of the warming apparatus. During the severe weather which prevailed in February and March, a series of experiments were undertaken with the view of ascertaining the actual amount of ventilation, and the expenditure of fuel requisite to warm the air. In order to determine the first of these points, the quantity of air entering by the fresh air shaft was frequently measured by an anemometer. The aperture by which the air passes from the fresh air shaft into the cold air channels is provided with a sliding door, by which the area of the aperture may be enlarged or contracted at will. At every observation the amount of opening was measured. During the earlier part of the period over which the observations extended, the supply of fresh air was entirely cut off during the night, the fire of the warming apparatus being also let out. This system had been in use at the hospital during the last two winters, and seems to have originated in that tendency to give greater weight to economical than sanitary considerations which is often found to prevail where it might be least expected. As might have been anticipated, the nightly suspension of the ventilation created an offensive atmosphere in the wards, which was particularly perceptible in the morning. This system having been discontinued, fresh air was afforded during the night, the quantity admitted being proportioned to the residual power of the warming apparatus, the fires of which were not mended during the night, but simply banked up. That the night ventilation under this plan was never too small, may be gathered from the fact that the quantity of fresh air admitted was only on one occasion so little as 25 feet per patient per minute, and was often double this.

The day ventilation of the wards amounted, on an average, to 67 cubic feet per patient, and on one occasion only was as low as 37 feet per patient.

The apartments on the ground-floor are not constantly occupied, but in the receiving-rooms a very large number of persons are collected together for a short time. For about two hours the receiving-rooms contain sometimes as many as three hundred persons, and the ventilation is at the rate of about 3,300 cubic feet per minute, or 11 feet per minute for each individual. With even this rate of ventilation, the atmosphere becomes tainted by the exhalations from the clothes, &c. of the large number of persons belonging chiefly to the poorer class, that are gathered together; and this effect is especially perceptible in wet weather. The continuous ventilation, however, soon removes all traces of vitiation when the patients have departed.

No offensive effluvia proceed from the water-closets. Those connected with the wards are, as has been observed, external to the main block of the building, and these, as well as others in different situations, are all separately ventilated by means of an extraction flue.

The temperature of the wards in winter is maintained at between 60 degrees and 62 degrees: during the severe weather which prevailed for part of February and March last, the temperature of the wards averaged 61 degrees, and was at no time lower than 57 degrees; the average temperature of the external air, by day and night for the same period, being 34 degrees.

The temperature of the receiving-rooms, and other apartments on the ground-floor, can be regulated according to the varying nature of the service to be performed.

There is one open fire-place in each division of the wards, and a small close range in the day-rooms. There are no fire-places on the ground-floor, except in the private rooms of the medical officers, to which warm air is not supplied.

The warming apparatus presents an effective surface of 3,400 feet of iron pipe heated by the circulation of hot water; the direct distance to which the water flows before returning to the boiler, being 200 feet.

The quantity of air passing through the wards and receiving-rooms in the day-time, amounted on the average of several observations to 13,400 cubic feet per minute. The mean external temperature at the time was 33 degrees, and that of the warmed air at its admission into the wards, 66 degrees. We thus have

$$\frac{13{,}400 \times 33}{3{,}400} = 130$$

cubic feet of air raised 1 degree per minute by 1 foot superficial of heating surface.

The above result does not exhibit the full effect, much of the heat being necessarily absorbed by the walls of the flues, and transmitted through their substance. If we add 20 per cent. for this, the heating power of the apparatus will be expressed by 156 cubic feet of air raised 1 degree by 1 foot of pipe surface, at a mean excess of temperature above the external air of 110 degrees.

Taking the actual day and night ventilation for seventy-two hours, and the weight of fuel consumed during the same period, the economical value of this system of warming is represented by 1 cubic foot of air raised 1 degree Fahrenheit by 0·000002 lb. of coal, or nearly three-fourths of the ultimate value of the fuel. This result, economical as it appears, compared with other common modes of warming, does not, for the reason above given, show all the effect produced.

Those portions of the building warmed by the apparatus described, have a superficial extent of cooling surface in external walls, &c. of 26,000 feet, and about 3,500 feet of glass. The thickness of the external walls is 2 feet. The walls are brick, rendered inside and finished with Parian cement.

The average temperature at which the air enters the wards is 66 degrees; and that of the extraction channels, 58 degrees. It appears, then, that the foregoing extent of cooling surface, united, cooled 13,400 cubic feet per minute, 8 degrees Fahrenheit; and the mean excess of the internal over the external temperature, for the period over which the observations extended, on which the above results are founded, being 28 degrees, we have 3,828 cubic feet of air per minute, cooled as many degrees as the temperature of the interior exceeded that of the external air. If, then, we assume that each square of wall surface cooled 10 cubic feet of air 28 degrees per minute—(see "*Nouveaux Documents relatifs au Chauffage et à la Ventilation*")—there will remain 1,828 cubic feet of air as cooled 28 degrees by 3,500 feet of glass surface, or rather more than half a cubic feet of air to 1 foot of glass.

It is worthy of remark, that in a constant system of warming, such as that in use at Guy's Hospital, the absorbing power of the materials of the building, and those forming the linings of the flues, have a powerful influence in preserving uniformity of temperature. Observations on the temperature of the air entering the wards showed a decrease of only 8 degrees in the temperature of the air thirty hours after the pipes had cooled, in consequence of the apparatus for fire having been extinguished; the direct excess of the air at its entrance into the wards, being still 25 degrees above the external temperature. This heat could only be derived from the brick walls joining the sides of the pipe channels, and from the surfaces of the flues through which the air passed. So certain and constant is the amount of heat thus repayed as it were by the walls, that it has been the custom to let the apparatus fire out from Saturday evening until Monday morning, relying entirely for the warming of the wards on Sunday upon the heat which the fresh air abstracts from the brickwork, in its passage through the pipe channels and fresh-air flues.

S. Egan Rossér.

VENTILATION OF SEWERS.

An important and a difficult point in reference to the general question of Metropolitan Drainage, is the proper ventilation of the sewers. An elaborate report has been made to the City Sewers Commission by their engineer and surveyor, Mr. Haywood, on this subject, and has been printed by order of the Commission, and distributed amongst its members.

The contents of this report are chiefly as follows:—Ventilation of sewers; origin of existing mode in use in the metropolis; necessity for; accidents caused by want of; injury to health of inhabitants of towns by want of. Of the gases generated in sewers and carried off by ventilation. The remedies proposed to obviate necessity for improved ventilation; by improvement in mode of constructing sewers and drains; by keeping the drainage channels in a high condition of cleanliness; by deodorisation of fæcal and other matters before passing them into the sewers; by deodorising with chemical agents applied in the sewers; by neutralising the emanations by the application of chlorine or other gases in the sewers; by a copious dilution with water. Length of drainage channel in the city. Of ventilation by the existing method; by the rain-water pipes of houses; by pipes or tubes carried up the fronts of the houses to the tops of the chimney shafts; by shafts or chimneys erected at suitable spots; by the lamp columns and jets of gas; by furnaces and shafts specially erected for the purpose; by the furnaces and shafts of factories, and others belonging to private owners. Of plenum ventilation by pumps, fans, or mechanical contrivances. Of vacuum ventilation by ditto. Of ventilation by the steam jet.

At the conclusion of his report, Mr. Haywood says:—

"A review of the various points touched upon, and the conclusions separately arrived at with regard to them, it must be confessed, is not very encouraging; indeed, the report seems to be but a recital of difficulties, which combat every suggested improvement, all seemingly insignificant, if not actually contemptible at first sight; but upon investigation found to be, from their peculiarity, formidable, if not practically invincible, and from which the only deduction must be, that there is but little hope of obtaining a thoroughly good uniform system of sewer ventilation at all, and, certainly not without great difficulty, and a large cost.

It has been assumed by me throughout, that it is absolutely essential to a town existence, that all sewer emanations should be either destroyed or withdrawn from the stratum of air usually respired by the inhabitants. The conditions of this complete system of ventilation are given at page 56. My considerations and conclusions are all based upon this dogma, and the unceasing uniform extraction of air from a vast system of subterranean channels, which alone will satisfy the strict necessities of that dogma, can only be accomplished by furnace ventilation, specially formed, adapted, and controlled by those charged with the care of the sewers.

Of the expense and extent of this system if applied, no one can give more than a mere approximation, for the information as to the ventilation of mines will assist but little; and as to the effects of the leakage (which will be one of the main difficulties), nothing but experiment of some magnitude can determine.

If any system less perfect than this can be admitted, if it may be made a matter of degree, then it only remains to decide to what extent, from the standard of perfect ventilation, retrogression may be allowed.

If the exigencies of public health will permit, if we may be content with transferring the stink from the street to the house tops, the furnace ventilation may be abandoned; for the uniform connection of the rain-water pipes of a district, and the erection of others where necessary, owing to structural arrangements in the sewers, and a few other auxiliary measures, will sufficiently ventilate them, and most of the street air-gratings may be closed, or partially so, and during ordinary atmospheric conditions, the streets may be left almost without nuisance from this source: it is for others to decide whether this so called necessity may be thus compromised, and which of this choice of evils is the least.

But if there is no doubt as to the injury resulting from the present system, if the proof is so ample of the danger of respiring air into which these emanations have been diffused; even to the extent that trace of them cannot be discovered by the sense of smell; if the demand for complete removal is imperative, and if it can be proved that draught will do this, then by furnace ventilation alone can it be obtained.

Experiments to determine the expense and best mode of arranging for the 150 square miles of London through which the sewers (channels of good, but not unmixed with evil) now run, must then be undertaken, and data for estimate of cost and laying out the system be obtained before the work may be commenced."

An outlay of between one and two thousand pounds, and a year's time, the reporter considers, would suffice to obtain practical results; and it remains to be decided whether the City Commission or the Metropolitan Board should carry out such an experiment.

HYDRAULIC MORTAR.

INSTITUTION OF CIVIL ENGINEERS.

On April 13, the paper read was an "Investigation into the Theory and Practice of Hydraulic Mortar, as made on the New Works of the London Dock Company, 1856-57." By Mr. G. Robertson.

The theoretical points treated of in the paper were those connected with the calcination and slaking of blue lias lime, the action of silica in protecting it from solubility, the setting of mortar, and its subsequent absorption of carbonic acid.

The second, or practical part, gave a detailed account of the method and cost of manufacturing mortar at the London Docks, as well as the effect of grinding on its strength and density.

It was observed, that many of the contradictory statements of writers on this subject appeared to have arisen from a misconception of the word "hydraulic," which ought not to be applied to limes merely because they set under water (as many soluble substances would do the same), but should be reserved for those which increased in hardness from the action of the water itself.

The chemical effect of calcination on blue lias was examined, and an account given of an experiment made on a large scale, to check the value of an analysis in predicting the yield of any limestone. According to calculation, 38·35 per cent. of water and carbonic acid should have been driven off in the kiln; but, on burning 145 tons of stone, and weighing the lime produced, it was found that as much as 40·63 per cent. had been driven off,—a difference, however, of only 2·28 per cent., due to a larger quantity of moisture in the mass than in the small specimen. The chemistry of slaking, or the formation of hydrate of lime, and the necessity for it, were next examined; and it was shown that when lias lime was slaked in such a manner as to form the best and strongest mortar, it increased 31 per cent. in weight, or 8 per cent. more than the water required to form a hydrate with the oxide of calcium found by analysis in the stone.

As lime was soluble in water, it must be protected, either naturally or artificially, before it could be used in hydraulic works. The nature of this protection had been the subject of many theories: its degree distinguished a lime from a cement, and gave rise to the phenomena peculiar to each. Clay, or silicate of alumina, being found in all hydraulic limes, silica and alumina were examined at length, and the peculiar value of each was pointed out; one as an active, the other as a passive agent in indurating limes under water. The author was of opinion that the action of silica did not commence, to any extent, until the completion of the hydration of the lime. This

theory was closely examined, and it was also shown that a certain quantity of free water was necessary to promote the action of silica in forming double silicates of lime and alumina. In nature this combination took place in the minerals of the zeolite family, of which hydraulic mortar was but an imperfect member. The phenomena exhibited both by limes and by cements were examined by these theories, and appeared to confirm them in a remarkable manner. The true time, both theoretically and practically, for mixing hydraulic lime as mortar was, therefore, at the point when hydration was perfectly over, and before the formation of silicates; "blowing" being avoided on the one hand, and friability on the other.

The different methods of slaking lias lime were then examined, and that of spontaneous extinction shown to be almost impracticable on large works, even were it desirable, which it was not. When slaked with the quantity of water practically found to make the strongest mortar, no difference was found to exist, on the large scale, between slaking in the ordinary way and by immersion. After trying about 400 tons, the latter system, proving about 50 per cent. dearer, was abandoned.

The next point treated of was the first hardening, or "set," which took place when mortar was permitted to stand undisturbed. This was proved to be due, not to desiccation, but to a mechanical absorption of the water of mixture, by the capillary attraction of the pores of the lime, hastened, or permitted, as the case might be, by evaporation, or by chemical agency. With immersed mortar this set was delayed until the imprisoning cells became a partial silicate of lime. Four modifications of setting were named; first, in slaked rich lime, where the action could not be chemical, but must be mechanical; second, in quick rich lime, where setting was hastened, by a portion of the water of mixture being taken up, chemically, in forming hydrate of lime; third, in slaked hydraulic lime, where the formation of insoluble silicates rendered setting possible under water; fourth, in cements, or hydraulic limes used quick, where the set under water was not only rendered possible, by the formation of the same silicates, but also hastened by the formation of hydrate of lime. The third case was examined at length, as the most applicable to the subject of the paper. The danger of "blowing," which resulted, more or less, when quick lime was used, was particularly pointed out, and instances given of the gradual decline of that system.

After alluding to the use of pozzuolana, the paper proceeded to treat of the ultimate hardness caused by the absorption, from air or water, of carbonic acid, and gave the distances it was found, from practice, to have penetrated into various limes and cements, with its rate of travel. It was ascertained by experiment, that the penetration varied inversely with the strength of the silicate in the mortar; and also, that limestones gave off carbonic acid to mortar in contact with them.

Allusion was then made to various substances which had at different times been deemed hydraulic. Alumina was valuable only as a cheap and convenient carrier of silica, to present it in a useful form to the hydrate of lime, and to assist in the formation of double silicates. The hydraulic value of the roasted ores of manganese, or of iron, of slags of all kinds, of magnesia and of ashes, was traced entirely to the quantity of silica present in them, in a useful form. Considerable attention had been paid to the hydraulic pretensions of iron, whether as a metal or an oxide, instances of both being given; and the conclusion arrived at, that it was of doubtful advantage in any form, and in some it was positively injurious.

In the second portion of the paper a minute account was given of the manufacture of the mortar for the London Dock Extension. Except for top work, blue lias from Lyme Regis was almost entirely used. It was burnt in two kilns erected by the company, each capable of holding 100 tons, the pair being able to keep up a daily supply of above 20 tons of quick lime. 100 tons of stone yielded 59·37 tons of lime, sufficient for 1,583 bushels of ground lime, 3,063 bushels of slaked lime, 231½ cubic yards of first-class mortar, and 262½ cubic yards of second-class mortar. Details of the price of burning, slaking, grinding, and all other stages in the manufacture of mortar and lime, for concrete, were given, both in the paper, and more elaborately in the appendix.

In slaking, the quick lime was spread out in a layer 6 inches thick: 74 gallons of water to the ton were then thrown over it, as evenly as possible, and the decrepitating lime was shovelled into heaps, and covered with sand till required.

The proportions of the mortar used at different heights in the work were given, with the contraction from the dry materials, after different periods of grinding. Two tables were exhibited, showing the effect of grinding, by which it appeared that the adhesion of the mortar was increased up to about 600 revolutions of the pans; after which it was injured by the gradual formation of silicates, with their accompanying result, friability. Up to the same point, the density of mortar was also increased; but, if the grinding was long continued, the mortar began to swell, with a puffy look and feel, caused by the water beaten up with it.

In conclusion, the paramount importance of good hydraulic mortar was urged, and it was hoped the paper would lead to a closer investigation of the subject.

THE AUTHORSHIP OF THE BRITISH MUSEUM READING-ROOM.

SIR,—Mr. Panizzi seems, at length, to have discovered that there is such a publication as the *Builder*, and that there is such an obscure individual as myself.

By a miracle, one single sheet, printed on one side only, from the types of the *Builder* of a particular date, germinated, grew, budded, bloomed, and bore fruit—a full and complete number of your paper of that particular date; and Mr. Fielder told Mr. Panizzi, in Mr. Jones's presence, who I was!

Even in this simple incident there is, indeed, something miraculous. There were many names besides mine in the *Builder* of that date, 22nd of June, 1850, and Mr. Panizzi informed Lord John Russell that "The article in the *Builder* was sent to him anonymously." What, then, could have brought my name especially up among this trio?

A more candid reference to what I have said in my recently-published "Observations," would have left Mr. Panizzi less to attribute to invention and dreaming on my part. But while carping at my statements of what he would have to be considered the main points in the case, Mr. Panizzi passes, without denial, the really important questions raised by me. Mr. Panizzi does not allege that I dreamt the tale I have told as to the assumed probable cost, and the computed capacity, of his plan of 1852, and of the real capacity and ascertained cost of the same plan (Mr. Panizzi still assures us that it is so), as now built; that Mr. Panizzi promised in 1852 to accommodate, upon the plan then produced, from 450 to 560 readers, and to do a great deal more besides, at a cost not greatly, if at all, exceeding 50,000*l.*; and that upon the same plan, influenced, it now appears, by "suggestions freely made" by himself in unreserved consultation, Mr. Panizzi has carried out, or, in his own phrase, "has seen built," an erection which will accommodate only 302 readers, though at the magnificent outlay of 150,000*l.*

Nor does Mr. Panizzi allege that I have invented the fact of the existence of an all but unused room in the Museum,—conveniently situated in it,—of sufficient capacity, and fully available for a reading-room, whether built specially for a reading-room or not.

It is no longer a question whether I have been ill-treated or not,—that has been determined in the affirmative;—but the proper question now is, whether the public interests have not suffered from the course adopted at the British Museum; and whether a reference to what I have proposed may not help to throw light upon the subject, and be a guide for the future. It has been suggested to me, that I ought to state the whole matter in a petition to the House of Commons; but I have despaired of obtaining any attention to a case that is so likely to be treated as one of merely personal interest. Mr. Panizzi's appearance as a complainant puts a new and more hopeful face on the matter, however, and I have now determined to do my part by petitioning, to obtain for Mr. Panizzi an opportunity of justifying himself and the trustees, and of exposing my ignorance and arrogance before a committee of the House of Commons. That curious influence which has done so much in and at the British Museum of late, in shelving books, *and something more than books*,—and in newly installing *something more than readers*, must, if exercised, readily obtain the appointment of a committee, and save your columns and the patience of your readers from further intrusion, until you shall be able to report progress.

Athenæum. WILLIAM HOSKING.

COMPETITIONS.

Sutton Coldfield.—The plans of Messrs. Bidlake and Lovatt, of Wolverhampton, have been selected for the Townhall. Messrs. Briggs and Everall, of Birmingham, have been awarded the second premium. There were seventy-three competitors.

Yeovil Cemetery.—The Burial Board have awarded the first premium of 20*l.* to Messrs. Norton and Wood; and the second premium to Mr. Robert Wheeler. There were forty designs sent in.

Box.—In the recent competition for the mortuary chapel, &c. at Box, the design of Messrs. Poulton and Woodman has been accepted, and tenders are to be procured forthwith. The design is Decorated, with a lofty bell-turret at the south-west angle. The walls inside are to be cased with stone, and the roof open-framed.

ST. JAMES'S HALL.

REMEMBERING the fact that the decorators were at work painting and gilding the upper part of the domed recess for the orchestra, while the plasterers were finishing the lower part, it may be useful to record that the material used throughout the hall was Martin's cement as manufactured by Stevens, in order that, noting hereafter how the colour stands, the occurrence may be accepted as an experience. We understand that the time occupied in executing the ceiling of the hall, irrespective of the ornament, was a few days under a month. The gold on the rib-mouldings stands well beyond what could have been anticipated: if we take into consideration the circumstance that the building was roofless during the greater part of January, it is a remarkable performance, and reflects the highest credit on Messrs. Lucas's exertion.

On Wednesday evening last, the hall was filled with flowers and fruit by the Horticultural Society,—azaleas and roses, strawberries and grapes—and the effect of the whole was charming in the extreme. The decoration of the ceiling is effective and beautiful, and withal not expensive, which should always be considered in settling the amount of praise to be given to an architect. Of course we have objections: we hinted at some in our recent notice of the building. The misfortune is, that if a critic, in the interest of art, mention an objection, all his admiration of other parts goes for nothing, and he is simply regarded as an objector: "he must either be with us or against us;" the tendency of which is to produce in the press a monotonous sing-song of praises (strikingly seen, for example, in the dramatic criticisms of the day), or tirades of pure abuse. The weak points in the decoration of the hall are Monti's figures over the windows: these are coarsely modelled, and being coloured to imitate life, mar the otherwise harmonious effect of this fine apartment. A conventional style of colouring instead of the naturalistic would lessen the objection.

Some of the forms in the ceiling are particularly good: the gilded foliage, for example, over the point of each window, is beautiful; the lighting too is admirable, and Mr. Owen Jones is justly entitled to the thanks of not merely the company for whom he has worked, but of the public.

SCENERY.

Princess's Theatre.—The great and deserved success which Mr. Charles Kean has achieved in Shakspeare's wonderful tragedy of "King Lear," will not be attributed, even by opponents, to the scenery and getting-up of the piece; for although a chronological consistency is preserved, and some effective scenes and groupings are introduced, these are scarcely up to his own standard, and would not suffice to carry off indifferent acting for any length of time. Abandoning the assumed early date of the play, Mr. Kean has selected the Anglo-Saxon era of the eighth century for the regulation of the scenery and dresses, and has realized a very interesting and instructive picture of early English history. The Room of State in Lear's palace, in the first act, is a rude chamber of partly wooden construction, hung with skins, and decorated with the heads of animals. In the scene on the heath a hurricane of clouds, and thunder and lightning approach reality almost too closely; and for the last scene there is an extensive view near Dover, overlooking the cliffs and sea, with the camp of the British forces, of considerable excellence and beauty. It is, however, in the acting of the principal part that the great attraction will be found, and on which, if it were our province, and it ought perhaps to be so more than it is, we could dilate with satisfaction. With a very complete knowledge of all that Mr. Charles Kean has done, and a conviction that his *Hamlet* stands alone, and is not approached by that of any other actor, we are yet disposed to consider his present assumption his greatest triumph in a histrionic point of view.

The "Plains of Enna" at the Haymarket.—No matter what is said in the *Builder*, there is always some one who "wants to know, you know," a little more about it. Thus, what we said of Mr. Calcott's clever scenery for Mr. Buckstone's new extravaganza leads one of this class to ask for some information about the Plains of Enna. Enna, or, more properly, Henna, is a city in Sicily, and was the principal site of the worship of Ceres. It is celebrated in mythological story as the place whence Proserpine was carried off by Pluto. Milton alludes to the fable very often, both in prose and verse. Thus, in the 4th book of "Paradise Lost," he says,—

> "Not that fair field
> Of Enna, where Proserpine gathering flowers,
> Herself a fairer flower, by gloomy Dis
> Was gather'd, which cost Ceres all that pain
> To seek her through the world."

And this is all we have time to tell our curious correspondent about Enna.

Books Received.

School Days of Eminent Men. By JOHN TIMBS, F.S.A. London: Kent and Co. late Bogue, Fleet-street. 1858.

THIS new work by Mr. Timbs is one of special interest. It is more than it professes to be. The first division of the volume treats of the progress of education in England from the reign of King Alfred to that of Queen Victoria. The second relates to the early lives of celebrated British authors, philosophers, and poets, inventors and discoverers, divines, heroes, statesmen, and legis-

lators. The volume is illustrated with sketches of schools, &c. We trust that a second volume is contemplated, in which artists of all kinds, architects, sculptors, and painters, inclusive, will hold a prominent place.

As a specimen of the agreeable style of the work, we may quote what is said of Edmund Stone, the mathematician:—

Stone was born about the year 1700. His father was gardener to the Duke of Argyle, who, walking one day in his garden, observed a Latin copy of Newton's "Principia" lying on the grass, and thinking it had been brought from his own library, called some one to carry it back to its place. Upon this, Stone, who was then in his eighteenth year, claimed the book as his own. "Yours!" replied the duke; "do you understand geometry, Latin, and Newton?" "I know a little of them," replied the young man. The duke was surprised; and, having a taste for the sciences, conversed with the young mathematician, and was astonished at the force, the accuracy, and the candour of his answers. "But how," said the duke, "came you by the knowledge of all these things?" Stone replied: "A servant taught me ten years since to read. Does one need to know anything more than the twenty-four letters in order to learn everything else that one wishes?" The duke's curiosity redoubled: he sat down on a bank, and requested a detail of the whole process by which he had become so learned.

"I first learned to read," said Stone. "The masons were then at work upon your house. I approached them one day, and observed that the architect used a rule and compasses, and that he made calculations. I inquired what might be the meaning and the use of these things, and I was informed that there was a science called arithmetic. I purchased a book of arithmetic, and I learned it. I was told there was another science called geometry: I bought the necessary books, and I learned geometry. By reading, I found that there were good books of these two sciences in Latin: I bought a dictionary, and I learned Latin. I understood also that there were good books of the same kind in French: I bought a dictionary, and I learned French. And this, my lord, is what I have done: it seems to me that we may learn everything when we know the twenty-four letters of the alphabet."

Under the patronage of the Duke of Argyle, Stone, some years afterwards, published in London a Treatise on Mathematical Instruments, and a Mathemetical Dictionary, was chosen a Fellow of the Royal Society, and became a distinguished man of science.

VARIORUM.

A SECOND EDITION of Mr. William Howitt's "Land, Labour, and Gold; or, Two Years in Victoria, with Visits to Sydney and Van Diemen's Land," has been issued by Messrs. Longman and Co. It embodies the most recent information regarding this interesting and important colony, and contains a graphic picture of life in the bush and at the gold diggings.

Miscellanea.

NETLEY HOSPITAL.—On the 16th, in the House of Commons, Mr. Weguelin asked the Secretary for War whether the Government had appointed a committee to investigate the report made by the Barrack and Hospital Commissioners upon Netley Hospital; and, if so, whether they were prepared to present to the House the report of that committee at the same time as they laid the report of the Barrack Commissioners upon the table of the House?—Mr. Tite inquired whether the works had been suspended, and if there was any objection to place in the library of the House the plan on which the hospital was now to be proceeded with?—General Peel was understood to say, that such contradictory reports had been made on this subject that he had deemed it advisable to send down a board of medical officers, who had hitherto given no opinion on the matter, to report upon the site and construction of Netley Hospital and other matters connected with the establishment; that he had submitted the names of several medical gentlemen to a right hon. friend of his (Mr. S. Herbert), who had devoted much attention to the subject, requesting him to offer any suggestions he might think fit; and that when he received his right hon. friend's reply he would immediately send down the board. In answer to the hon. member for Bath (Mr. Tite), he begged to say that he would at once have suspended the works had it not been impossible to do so, as they were undertaken on contract, but he had no objection to lay the plans before the House.

ROYAL ENGINEERS AND CLERKS OF WORKS.—We are truly thankful for the kind manner in which you have been pleased to defend our cause (the Royal Engineer department) in your publication. There is an evil you do not appear to be aware of, and that is that the military officers have periodically to report on the capabilities of the civil officers confidentially: the consequence is, that if the two branches of the department are not on friendly terms, the one has the power to seriously injure the other at head quarters, without the injured party being able to defend themselves, or knowing anything about it, which cannot be considered a good system.—SUFFERERS.

SANITARY PROGRESS AT THE GENERAL POST-OFFICE.—The fourth report of the Postmaster-General on the Post-office, printed by authority, embodies a report by the medical officer, Dr. Lewis, on sanitary matters. From this report it appears that the annual holiday and the Saturday half-holiday are giving highly satisfactory results, in decreased absence from illness and cheerful performance of extra and other duties. The general health of the officers is said to be good; but an inquiry made as to the homes of the letter carriers, sorters, messengers, &c. shows that much of the sickness which has hitherto existed is attributable to the small, close, and ill ventilated houses or rooms in which they reside; and the Postmaster-General states that he was in hope that by this time some company would, as a commercial undertaking, have provided suitable abodes for them, the rents they pay being sufficient to repay such a company, especially as the department has expressed its readiness to give a guarantee against loss from arrears of rent. It appears that the officers alluded to pay a very large proportion (from 12 to 20 per cent.) of their small salaries for rent alone. The medical officer states that he has approved of a plan for ventilating the chief office, suggested by Mr. Cowper, C.E. which he hopes will supply all the offices with a sufficiency of fresh air without causing draughts,—a "very difficult object," as he rightly observes. Measures had also been taken otherwise to exclude draughts from the hall and passages, and to warm the air passing through them.

COMPLETION OF THE NELSON MONUMENT, TRAFALGAR-SQUARE.—There is at length a prospect of the completion of this monument. Admiral Walcott, in the Commons last week, called upon the Government, and the Parliament itself, to cancel the stigma of ingratitude under which the nation lay, on account of the long unfinished state of this monument; and Mr. Disraeli, interpreting the feeling of the House, at once promised to see to its completion, remarking at same time that such monuments ought not to be erected by individuals, but by Parliament.

COMPLETION OF THE DUKE OF WELLINGTON'S TOMB IN ST. PAUL'S CATHEDRAL.—On Thursday in last week, the final slab was placed over the remains of the late Duke of Wellington, in the crypt at St. Paul's Cathedral. The sarcophagus was then hermetically sealed. The tomb is constructed of porphyry, and has been highly polished by Messrs. Malcott and Co. the well-known marble merchants, and manufacturers of mural monuments. It lies immediately beneath the centre of the dome of the cathedral.

SANITARY PROGRESS IN RYDE.—We glean the following from a printed "Report of the Proceedings of the Commissioners" of Ryde, by the chairman of the Board, Mr. Benjamin Barrow. On waterworks there has been expended the sum of 21,660*l.*; on sewerage, 4,349*l.*; esplanade, 4,597*l.*; and on roads, pavements, gutters, gully-pits, &c. other considerable sums, all under the Local Improvement Act of 1854. The number of houses in Ryde before the passing of that Act, was 1,343: in January, 1858, the number was 1,656. In 1854, the population was 7,147; and now it is about 9,100. The sanitary results of the works already carried out, are decided and notable, in the improved health of this increased community. The parish medical register shows a diminution of cases, of fever and diarrhœa, to the extent of 100 per cent.; while the severity of those cases which do occur has been diminished to an equal extent. It is proposed to drain the Monkton marshes, and convert them into public gardens for healthful exercise, and to provide an annual sum to sustain a public library and museum for behoof of the townspeople. Mr. Barrow has evidently entered upon the work *con amore*, and will do much good.

MUSEUM OF THE SCIENCE AND ART DEPARTMENT.—New rooms, containing the most valuable of the collections made by the Department since its origin, were opened by the Queen on Wednesday, the 14th, and are now free for public use and inspection. The collection in some divisions will bear a comparison with that of the Hôtel de Cluny. We shall give some particulars before long.

PUBLIC BEQUESTS.—Mr. Samuel Oldham, of Oak View, Audenshaw, near Ashton-under-Lyne, a benevolent cotton manufacturer, lately deceased, has, by his will, left 10,000*l.* towards an infirmary for the indigent poor of Ashton-under-Lyne and neighbourhood, provided a suitable building is erected for the purpose by local subscription within three years after his decease. He also leaves the interest of 7,000*l.* towards the maintenance of a public park for the inhabitants of Ashton-under-Lyne.

INAUGURATION OF BRISTOL FINE ART ACADEMY BUILDING.—The annual meeting of the members of this academy was held on Monday in last week for the first time at the new building, when an inaugural address was delivered by the president of the academy, Mr. J. S. Harford, who occupied the chair. After reviewing the history and progress of the institution, the president remarked that,—although artistic power, or a genius for art, may deserve to be regarded, like poetry, as a natural gift; it requires, in order to its due development and perfection, the discipline of appropriate culture,—the practice, for instance, of drawing from the human figure, together with the study of the finest models. Hence the use and benefit of academies of art, in which these and congenial studies are carefully prosecuted, and suitable models are, as far as possible, provided. If to these indispensable studies the artist unites an intimate acquaintance with the finest productions of poetry and elegant literature, the means of which are, in the present day, so generally diffused, he will greatly enlarge the sphere of his imagination, and strengthen his intellectual powers. Some acquaintance, also, with the progress and discoveries of science will prove scarcely less beneficial. The value of such union between the fine and the liberal arts and sciences, is poetically portrayed by the Greeks, who surrounded their Apollo with nine muses, the representatives not only of painting and sculpture, of poetry and music, but also of the sciences; while their harmonious conjunction is beautifully indicated by their making them dance together in a chorus. We live in an age in which, under these and kindred influences, Englishmen may well be proud of the high degrees of perfection which the fine arts have attained in their native country. "I was most forcibly struck with this conviction," he added, "while visiting the Manchester Art Exhibition last summer. Never before did I receive so strong an impression of the eminence of our English school as compared with those of the Continent, or even with the works of the old masters." The opening of the new building was also celebrated on the Tuesday evening by a *conversazione*, the first of a series, when the entire suite of rooms was thrown open to crowds of visitors, numbering altogether not less than 500.

INSTITUTION OF ENGINEERS IN SCOTLAND.—On Wednesday evening, the 14th instant, this body met for the election of office-bearers for the second session, 1858-9, when the following gentlemen were duly elected:—Prof. Macquorn Rankine, president; Messrs. W. Neilson, J. R. Napier, and W. Tait, vice-presidents; Messrs. J. Elder, W. S. Dixon, N. Robson, D. Rowan, P. Stirling, A. M'Onie, W. Johnstone, R. B. Bell, B. Connor, and A. Allan, councillors; Mr. D. More, treasurer; and Mr. E. Hunt, secretary. A very successful session was wound up by the reading of a paper "On American Locomotive Engines," by Mr. W. Neilson, and of one "On the Stability of Locomotives," by Mr. J. G. Laurie,—animated discussions following both papers.

ROUND TOWERS OF IRELAND.—These buildings have long been provocative of controversy, and the paper we printed a short time ago has of course brought us many communications. As, however, they simply go over the old ground, we cannot afford room for them. Mr. W. White has favoured us with a sketch of a crucifix sculptured over the door of the round tower at Donoughmore, as affording evidence of the Christian character at least of that example. This sculptured representation is well known. An engraving of it will be found in Wakeman's "Handbook of Irish Antiquities." For a communication from Mr. Hills, in reply to a correspondent whose letter we printed, we will endeavour to find space next week.

DISCOVERY IN ELECTRICITY.—Dr. C. G. Page, of Washington, it is reported, has discovered that positive electricity will extinguish the flame of a lamp, and negative electricity increase it;—that when a flame of about two inches height is charged positively from a powerful machine, it is rapidly shortened to total extinction; and that when the flame is charged negatively, it is immediately enlarged, a portion of it being impelled down around the wick tube for the distance of an inch, and a portion also elongated above. These reported experiments appear strongly to corroborate a theory which has been occasionally broached in the *Builder*, and according to which it has always been maintained that positive electricity bears a stronger analogy to the force of cold than to that of heat, while negative electricity has an equally strong analogy to heat. The probable close relationship of actinism to negative electricity was also indicated.

ART-UNION OF LONDON.—To aid in preventing disappointment on the part of subscribers and others interested in matters of art, who desire to be present at the annual meeting of the Art-Union of London, we would direct attention to the advertisement, which shows that the meeting is to be held on Tuesday next, in the Haymarket theatre, at half-past eleven o'clock. Lord Monteagle will preside. We shall give a full report of the proceedings.

ST. MARY'S, TAUNTON. — A "Member of the Somerset Archæological Society," is protesting against the proposal to rebuild it of Ham-hill stone. He says, "The churchwardens assure us that the new tower 'is to be built of Ham-hill stone, the most ornamental and durable that can be procured: in short, it is intended to be a perfect *fac simile* of what the tower was before it was deprived of its ornamental and architectural beauties.' Now, the tower is not built of Ham-hill stone, but of Keüpen stone, a grey stone, and owes much of its beauty to relief of colour; the cold tone of the Keüpen stone being agreeably contrasted with the warm tint of the Ham-hill, which is only used for the carved ornamental work. So that were the tower replaced by one of Ham-hill stone, it would be no *fac simile*, but a very imperfect substitute. Can any reason be given for rebuilding the tower with Ham-hill stone? I can only suppose it originated in a mistaken notion that the tower is built of that stone, through the quantity of carving with which the building is enriched being executed in that material. Be this as it may, I am persuaded that a tower of Ham-hill stone would be a monstrous production in this age—eminently the age of contrast as regards the colour of the materials used in architectural decorations." "This practice was adopted in building St. Mary's; the grey stone, I am informed, having been furnished from a quarry a few miles from the town; but so convinced was the architect of the importance of contrast, that he sent to Ham-hill for the warm-coloured stone, in order to accomplish this in his building; and the whole of the carved ornaments were designed to this end, being with the exception of the windows flat and small, and which, in stone of uniform colour, would be meaningless and ineffective. Where no contrast was required the Ham-hill was no longer used. I say, then, the whole effect of the building is destroyed if the original colour is not adhered to."

TESTIMONIAL TO MR. GEORGE WALLIS.—This gentleman having resigned his appointment as head master of the Birmingham School of Art, a committee has been formed to present to him a suitable testimonial, which it is intended shall consist of a valuable specimen of local art manufacture.

GAS.—A new gasholder has been completed at Bury, after a struggle with difficulties, in consequence of the nature of the soil and springs. The engineer first employed (Mr. Jabez Church, of Chelmsford), was aided by the further advice of Mr. Burnell, of London, and the difficulties were surmounted, though not without an enormous amount of clay puddling, as well as of cement and asphalte, adding greatly to the original estimate of the cost. The gasholder now finished is 50 feet in diameter, and when filled will be 36 feet high, containing between 80,000 and 90,000 cubic feet of gas.

FALL OF THREE HOUSES IN LIVERPOOL.—Three old houses in New Bird-street, off St. James's-street, which had been condemned, and were untenanted, fell last week; and five others, which were also condemned but still inhabited, were afterwards pulled down to prevent further accident.

EDINBURGH CASTLE.—A memorial has been forwarded to General Peel, calling attention to the works at present carried on in the castle by Colonel Moodie, the officer of engineers who is stationed there. The memorialists say,—"The castle is the object of our greatest pride, and through old associations, together with its own features of commanding beauty, has become so endeared to the inhabitants of this city that they would regard any alteration of it, even in the way of improvement, with extreme jealousy. It may, therefore, be imagined with what feelings we have witnessed, and are daily witnessing, the destruction of this noble fortress. Many of the buildings have been demolished, others have been converted into ridiculous travesties of defensive works, and enormous masses of masonry are in progress, with the most threatening aspect of deformity." The designs should at any rate be made public, and subjected to the examination of professional authorities. The castle is too precious to Edinburgh to be sacrificed.

GLASGOW ARCHITECTURAL SOCIETY. — On Thursday night, the 15th, the members of this society held a *conversazione* in the Scottish Exhibition Rooms. Mr. James Salmon, in the absence of Mr. Baird, presided, and was supported by Sheriff Steele, Councillor Graham, Rev. Dr. Jeffrey, &c. The chairman, after making a few introductory remarks, called upon Sheriff Steele, who read a paper "On the Utility and Pleasure of Architectural Studies," urging that architecture, considered in its true relation to human nature, and in its broadest and best developments, as a cultivated science, is not only the handmaid of utility, but the pioneer, the attendant, and the aspirant of the loftiest and most graceful sentiments. Mr. Gildard, in a subsequent address, referred to Glasgow's high position in architecture, and dwelt chiefly upon the refining influence of the science in elevating the moral and intellectual tastes of the community. The chairman afterwards announced that this was the last meeting of the present session, and that the new session would be opened in October next, when he hoped the child would have become a full-grown man.

HOW TO BECOME A SURVEYOR.—Sir: As I perceive from the request of "Silvio," in your last number, of the 17th instant, that you are the medium through which a man may learn a profession, without serving a time or studying, I beg to ask if any of your readers can tell me how I should begin with the trigonometrical survey of a large town? how the angles are taken and how calculated? also how you would measure the base? I would also like to know if the datum line for levels is taken from the highest or the lowest part of a town? which is the best way to lay down the work? whose instruments are the best? who gives the longest credit for paper? and where are surveyors to be obtained for from 3s. to 4s. a-day? As I see that "Silvio" appears to gain information of a professional nature in this easy way, perhaps you will pardon me for doing the same, because I was not aware till now that this was the way surveyors obtained their knowledge.

SYLVIAN.

[ADVERTISEMENT.]

THE STORY OF THE SULTAN MOURAD AND HIS WELCOME GUEST.

THE Sultan Mourad was dying of *ennui*; he was wearied out of his life. The Sultan Mourad had seen everything, done everything, tried everything, eaten everything, drunk everything, succeeded in everything, and he was weary of everything. He was sick of his wealth and his wives, his dominions and his doctors, his vizier, his jester, and himself. The learned pundits of his empire came and read to him poems in praise of himself; but he never heeded the learned pundits. The artists came and showed him beautiful pictures, but he shut his eyes, and would not look at their productions. The singers sang, the dancers capered, the acrobats threw summersaults, spun basins, and swallowed scymitars; the magicians wove spells—but the Sultan Mourad only yawned. The physicians said he was dying, and shook their heads; the people said he was dying, and tore their beards. They would have torn their garments too, only there were no Jews in the empire of Mofussilistan, and old clothes were at a discount.

The worst of the matter was, that yawning being the fashion at Court, the entire population took to yawning, too; and throughout Mofussilistan there was but one universal stretching of the arms and dislocation of the jaws. The Sultan Mourad exerted himself to rouse his subjects from their lethargy, and for some time found a pleasurable excitement in beheading, impaling, bow-stringing, skinning, bastinadoing, and boiling alive those obstinate people who wouldn't be amused. But it was no use. The Mofussilites didn't care a bit for impalement, and yawned while the bastinado was being applied to the soles of their feet.

As a last resource, and by the advice of Seedy Pasha, his Grand Vizier, a sage of immense learning, who had a beard as long as a lawyer's bill, the Sultan caused it to be proclaimed throughout his dominions, that upon whomsoever could afford him rational amusement for the space of one hour, he would bestow the sum of one million tomauns in gold, and the hand of his thousand and first daughter, the beauteous Princess Singsong Pollywon'tyoutrymeorazade, surnamed the "Pearl beyond Price." The penalty for failure was of course the inconsiderable trifle—death. There were thousands of applicants for the tomauns and the princess; but the Sultan indignantly declared that he had never met with such a set of bores in his life; and you might have played at skittles with the heads of the unsuccessful candidates, which were daily swept off by Kalkraft Khan, the chief executioner.

One day a Dervish, with a torn turban, presented himself at the palace gate, and announced his intention of competing for the prize. The hall porter shook his head as he admitted him, and told him, by way of friendly warning, that he knew a young man very like him who died of sore throat only the day before; but, nothing daunted, the Dervish strode onward through lines of guards, and slaves, and eunuchs to the Great Hall of Audience, where the Sultan Mourad was sitting cross-legged, yawning, while he caught flies, and Kalkraft Khan was sharpening a new scymitar, yawning as he applied the whetstone, and the Grand Vizier Seedy Pasha was screening his mouth with his hand, for fear the Sultan should order his head off for yawning too.

It is a fact that, within the stipulated hour, the ragged Dervish kept not only the Sultan Mourad, but his whole Court, and the terrible executioner Kalkraft Khan, to boot, in one continuous state of pleasurable excitement. First they laughed, then they wept, then they were puzzled, then they listened with breathless attention but they were always interested. The Dervish sang songs, told stories, cracked jokes, related anecdotes, showed them pictures more interesting than they had ever seen before, and delighted them all so much, that when the hour was up, the Sultan begged and prayed that he would stop yet an hour longer.

But the Dervish shook his head, and said that he had to be off by express train to amuse a Sultana who was also being bored to death some thousands of miles away.

"Wonderful man," cried the Sultan, "take at least thy reward. Ho, there! chief of the guards of the harem, tell the Princess Singsong Pollywon'tyoutrymeorazade to put on her wedding-dress."

"Don't do anything of the sort," interposed the Dervish. "My intentions are not matrimonial. The Princess may go to Hong-Kong for me."

"Incorrigible bachelor," remarked the Sultan. "Ho! there!" he continued; "Ben-Disraeli Pacha, pay this wondrous mortal a million of tomauns in gold, on the instant."

"Keep your money," the Dervish again interposed. "I never take more than a penny."

"Ho, there, Chief Executioner," the Sultan, who was beginning to lose his temper at these pertinacious refusals, began.

"Don't trouble yourself, Light of the Universe, First Cousin to the Sun, Moon, and Stars," the undaunted Dervish returned. "You want amusement, don't you?"

"Allah knows that I do," replied the Sultan, with an incipient yawn.

"Then," continued the Dervish, "I will undertake to amuse you, your whole court, and your whole people, for a penny a week. Once a week will I visit these halls of dazzling light, when you shall hear my tales and stories, my songs and anecdotes, my narratives of travel and adventure, my jokes and odd sayings; shall see the pictures from my magic portfolio, and for the remaining six days yawning shall be impossible, and boredom out of the question. Your interest shall be excited, your curiosity awakened, your sympathies evoked, and all for the small sum of one penny."

"Agreed, agreed," shouted the delighted Sultan. "But by what name shall we call thee, marvellous benefactor of a yawning generation?"

"You shall call me," replied the Dervish, in a cheerful tone of voice,

"'THE WELCOME GUEST,'

For I mean to be a guest, and a welcome one too, in thousands of your subjects' homes. And now farewell for the present. Give me my penny, and let me be off: and on the 1st of May you shall have another visit from your 'Welcome Guest.'"

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Office: 148, Fleet-street, London.

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GENTLEMEN,—In reply to your inquiry as to my opinion of your Shutters and other Work, I beg to say that the Brass Front and Stall-board Plates you made for me I think equal in finish, and, indeed, altogether such as are not to be excelled by any other in London: it wears well, and I think the colour of the Brass is excellent. As to the Shutters, it is now Eight years since they commenced work, and I believe Twenty Shillings will cover all charges for repairs during that time; they do, and have worked well during all that period, and I believe them to be as sound now as on the day they were fixed.

Yours obediently,
JAMES MEDWIN.

TENDERS.

For Islington Vestry-hall. Mr. Allom, architect. Quantities by Messrs. Charles Sewell and S. B. Wilson and Son:—

J. and W. Todd	£6,599	0	0
J. Phillips	6,392	0	0
Wood and Son	6,160	0	0
G. S. Williams	6,040	0	0
Wm. Hill	5,941	0	0
J. D. Cowland	5,939	0	0
H. Patman	5,900	0	0
S. B. Hocken	5,900	0	0
W. Higgs	5,885	0	0
G. Carter	5,869	0	0
Patrick and Son	5,865	0	0
Thos. Rudkin	5,800	0	0
J. Thompson	5,770	0	0
J. Ashton	5,600	0	0
Adamson and Son	5,566	0	0
M'Lennan and Bird	5,444	0	0
W. T. Purkiss	5,407	0	0
W. Downs	5,396	0	0
W. H. Rowe	5,163	0	0
G. Wheen	5,117	0	0
W. Dove (accepted)	4,987	0	0

For the Congregational Chapel, Angel-street, Worcester. Messrs. Poulton and Woodman, architects:—

Priddey and Son, Worcester	£5,000	0	0
Wheeler, Reading	4,400	0	0
Chambers and Hylton, Birmingham	4,044	0	0
Hemming and Son, Worcester	3,885	0	0
Walker, Evesham	3,740	0	0
Holland	3,476	9	0
Wood and Son, Worcester (accepted)	3,127	0	0

The above tenders are in addition to the old materials.

For alterations to the residence of Colonel Macbean, Richmond, Surrey:—

Jacklin	£785	0	0
Penfold	726	11	0
Long	719	0	0
Sweet	627	0	0